Q2 2021

WORLD BUNKERING

THE OFFICIAL MAGAZINE OF IBIA

A PROMISING FUTURE?

LNG AND SCRUBBER SUPPORTERS SET OUT THEIR PITCHES



INSIDE THIS ISSUE:

FLASHPOINT DEBATE - IMO UPDATE
INTERVIEW: INDUSTRY 'CHANGED FOREVER'
CARBON TAX: HOW WOULD IT WORK?

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CHANGING TIMES

Dear Reader,

In our Interview in this issue KPI OceanConnect's CEO, Søren Høll, asserts that the bunker industry has "changed forever". And he is absolutely right. Covid-19 and IMO 2020 have wrought huge change to our sector.

However, change is not something that just happens once and we then all adapt to a new reality and get on with it. Rather, change is continuous and there is every indication that the speed of change is increasing.

The main driver of change now is the imperative to achieve 'zero carbon' by some time quite soon. Just when that will be is also subject to continual change. Some will see that as always shifting the goal posts. Perhaps so, but get used to it. That is the way things will be going forward.

Decarbonisation is a necessity. The industry doesn't have an option. However, necessity is, as the old saying goes, the mother of invention. Right now, there is a lot of inventing going on, or more accurately a huge amount of research and development work on alternative fuels and other ways to move towards zero carbon.

Those who support the general use of LNG as a marine fuel say that we are years away from practical solutions using any of the various alternative fuels currently under development. That case is reported in our LNG feature. Certainly, the number of LNG-fuelled vessels, newbuildings and now to some extent conversions, is rising steadily. LNG works as a fuel for large sea-going ships and the required bunkering infrastructure is also increasingly being put in place.

The use of LNG is, however controversial and, in Environmental News, we report on the green lobby's efforts to dissuade the European Commission from supporting LNG. The same environmental campaigners are, we also report, very unhappy at the idea of using biofuels, citing the harm that the use of crop-based biofuels can cause.

Whether we are really so far away from practical, affordable alternative fuels must be open to question. The speed with which coronavirus vaccines were developed astounded all the experts. What would normally take 10 years took 10 months. It may well be that alternative fuels will be a brought into general use far more quickly than may have been anticipated, given the urgency and the amount of effort being put in. Our pages are full of developments in this area, including an update from IBIA's working group on future fuels. The pace of change is speeding up.

In general, the environmental groups and the proponents of LNG have little common ground. But one thing they do agree on is that the use of scrubbers is not a long-term solution. Well even that assumption needs looking at closely and we do precisely that in our extended Scrubbers feature. Certainly, scrubbers will be an important part of the mix for a considerable time.

The intriguing question is whether this approach can be developed into viable carbon capture. That is something we will look at in detail in the next issue of ***Word Bunkering***.

As ever, IBIA director Unni Einemo has been working hard representing the industry at IMO. As important as decarbonisation is there are other priorities than must be addressed and her report on IMO focuses on safety issues and especially on flashpoint. This is a complex area but Einemo explains why flashpoint is a hugely complex subject, and why changes to regulations could have unintended consequences.

There is, as always, much more within our pages, including features on the Eastern Mediterranean, Africa and the Indian sub-continent.

Overall, this issue of ***World Bunkering*** reflects a dynamic industry that is learning to cope with coronavirus and is continuing to adapt to an ever-changing regulatory environment.



David Hughes
Editor

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- Provision of anti piracy security in High Risk Areas.













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DEAR IBIA MEMBERS,

The future of our industry is complex and the uncertainty can sometimes be overwhelming as the path forward seems blurry and confusing with the many roads towards a greener and more digitalized future.

However, this complexity will be the accelerator of our industry for transforming it to the next level beyond IMO's 2030 and 2050 greenhouse gas (GHG) emission reduction targets, toward the ultimate goal of carbon neutral transportation.

During the next decade, we will be part of a transformation that will change the bunker industry forever and bring us fast forward to the future where green solutions will be key for worldwide sea transport.

To cope with such a large transformation, we have in IBIA been preparing for some time, working on three major areas of focus:

- IBIA ORGANISATION DEVELOPMENT
- BUNKER LICENSING SCHEME AND MFM
- IMO 2030 & 2050 ENGAGEMENT

I am delighted to say that all three areas have had a lift-off during the past six months, despite the Covid-19 challenges, and that IBIA is moving faster than ever before on those areas with the clear ambition of preparing IBIA as an organisation to guide, gather and influence our industry towards the future.

IBIA remains the voice of the bunker industry at IMO – the UN organ for maritime affairs - where IBIA's director Unni Einemo has raised our concerns and points of view and made an effort to influence the future for our industry where it really matters.

The work and effort that the IBIA working groups, secretariat and a wide range of members put into the preparation and understanding of the complex, political and highly sensitive discussion at the IMO is a huge inspiration for me as IBIA chairman. I am again and again amazed by the quality of the work IBIA is capable of bringing to the table at IMO.

This unique position that we in IBIA have worked for and today fulfill on behalf of the bunker industry is something that we will continue to focus on as the decisions that IMO takes will have a large influence on all our businesses, hence the importance of continuing the dedicated work that IBIA does at IMO.

IBIA Organisation Development

The process of establishing IBIA regional boards is well underway. Presently, the global board is reviewing the proposal to establish an interim regional IBIA board for Africa and we expect to be able to launch this during July 2021.

In Asia our interim regional IBIA board has been active for more than a year with great success. The regional board has proven to us all that with the right local involvement, IBIA can bring even more value, both for the region and the overall work and influence at IBIA, as the distance from the regions to the global board has become much shorter. IBIA, as a membership-based organization, has benefitted greatly by this development.

Next in line will be the Americas where we are getting closer to taking a decision on the regional interim board. This work is led by Adrian Tolson with strong assistance from Eugenia Benavides, Nicolas Vukelja and Steve Simms, who are all members of the IBIA global board. With these people we are confident that we have a very capable team on this task.

We trust that we will be able to share further updates about progress with the interim regional board for Americas at the IBIA Conference on 1--2 September this year.

IBIA Working Groups

The IBIA working groups have always been a fundamental part of the value that IBIA has provided its members.

Recently we have launched two new dedicated work groups, who together with our existing Legal working group all work on dedicated tasks that support IBIA's three focus areas.

One of these is the Future Fuels working group that will support IBIA's ambition to manage the GHG challenges for the shipping industry. The chairman of this working group is IBIA board member Constantinos Capetanakis of Starbulk SA and many IBIA members have volunteered to participate in this important work.

The other is the IBIA Bunker Licensing & MFM working group, where we have been fortunate to have Alexander Prokopakis, the CEO of ProBunkers, taking the helm as chairman.

This dedicated working group directly supports IBIA's ambition of a more transparent and aligned view on Bunker Licensing & MFM in the major bunker hubs.

Both groups are off to a roaring start and when I look at the members who have joined the working groups, I feel that we at IBIA can be very proud of both the diversity among the members and the power in these working groups. This confirms that IBIA's influence and position in the industry is second to none.

Finally, one of the largest and more complex assignments is the transformation of IBIA to have both a global board and regional boards. IBIA's board members are determined to ensure that the future will be based on a fair and transparent election process for both the regional and global boards, and we have given this difficult task to the Legal working group.

Once again, I am positive when I see the list of the members who are already engaged in this. The legal capacity and geographical reach are impressive, and I am confident that our Legal working group will be able to overcome the challenging task ahead of them.

The IBIA working groups are one of many of our membership offerings where we see IBIA adding value both for those who actively participate in the working groups and for all members. When sharing conclusions and findings from our working groups with the members, or the results become part of IBIA politics and future direction; that is where we experience that we are adding value.

I want to thank all the members and chairmen of our working groups for your efforts. It is your work that forms a large and important part of the direction of IBIA and continues to make IBIA relevant and influential in the industry.

I am confident that the future will continue bringing us challenges, but with a strong platform, we can ensure that IBIA members with different views and background can meet and learn from each other and together better overcome whatever we will be faced with in the future.



Henrik Zederkof
Chairman

AMA

AMA Research & Development (S) Pte. Ltd.

Marine Fuel Analysis

Test parameters included in ISO 8217,
Table 1 – Marine distillate fuel
Table 2 – Marine residual fuel

Additional tests beyond ISO 8217 requirements, including lube oil, are available.

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YOUR VOICE AT THE IMO

Without IBIA, the perspectives and understanding of the bunker industry may not be heard

Regulations and associated guidelines developed by the International Maritime Organization (IMO) affect the supply and use of marine fuels in many ways. As an NGO with consultative status at the IMO, IBIA has the right to attend IMO meetings to represent our industry's interests and provide relevant expertise to the IMO's work and deliberations.

IBIA is unique among the NGOs at the IMO. We are the only NGO to represent fuel oil bunker suppliers directly. We are also able to bring a holistic view because our membership encompasses stakeholders across the marine fuel value chain: marine fuel producers, physical suppliers, trading and broking intermediaries, marine fuel consumers and a range of associated stakeholders and service providers such as fuel testing agencies and surveyors, storage providers, maritime lawyers and consultants, port authorities, credit reporting companies and specialist journalists.

IBIA keeps a close watch on all IMO work that has a direct or indirect impact on the supply and use of all types of marine fuels, or 'bunkers'. This is still dominated by oil-based bunker fuels, but it is beginning to change as pressure grows on the IMO to develop policy tools to deliver big cuts in greenhouse gas emissions from international shipping in the coming years. There is also work underway at the IMO to impose further regulations directly on fuel oil bunker suppliers.

Without IBIA being active at the IMO, the development of regulations that affect our industry would be left almost entirely to IMO Member States and the large number of shipping organisations and associated bodies, as well as environmental organisations with consultative status at the IMO, many of whom view the bunker industry with deep suspicion. As IBIA's IMO Representative, I can tell you it can be a tough gig to be heard and understood, but we fight your corner as best we can by providing insights, reasoned arguments, and pragmatic solutions.

To ensure we stay abreast of developments, IBIA attends all relevant IMO meetings and we are active in IMO Working Groups dealing with fuel-related matters during committee and sub-committee meetings, and intersessionally in Correspondence Groups. We bring relevant expertise from IBIA's membership, primarily from the IBIA Technical Working Group, to advise and take part in IMO Working Group and Correspondence Group deliberations.

In the past couple of years, IBIA has contributed to the work of IMO through submissions, either on our own or as a co-sponsor, to the Marine Environment Protection Committee (MEPC) and the Sub-Committee on Pollution Prevention and Response (PPR), and most recently to the Sub-Committee on Implementation of IMO Instruments (III). Much of this has been follow-up items relating to consistent implementation of the 0.50% sulphur limit.

We have also co-sponsored submissions to the IMO's Facilitation Committed (FAL) and the Sub-Committee on Ship Systems and Equipment (SEE). Moreover, IBIA has provided input to several IMO Correspondence Groups, including: Data Collection and Analysis under Regulation 18 of MARPOL Annex VI, Air Pollution and Energy Efficiency (MEPC), Fuel Oil Safety (MSC), IGF Code (the Sub-Committee on Carriage of Cargoes and Containers - CCC) and Guidance to Address Maritime Corruption (FAL).

IBIA plans to attend all MEPC, MSC, PPR and CCC meetings this year and next, as well as FAL and III, plus some other IMO meetings to observe. IMO agenda items we will follow closely, and intend to participate in relevant working and correspondence groups between meetings, include:

MEPC: Air pollution prevention, Reduction of GHG emissions from ships, Pollution prevention and response
MSC: Development of further measures to enhance the safety of ships relating to the use of fuel oil
CCC: Amendments to the IGF Code and development of guidelines for low-flashpoint fuels
PPR: Reduction of the impact on the Arctic of emissions of Black Carbon from international shipping
FAL: Guidance to address maritime corruption
III: Measures to harmonize port State control (PSC) activities and procedures worldwide

Meetings at the IMO are coming thick and fast, but as they have been taking place online since the second half of 2020 due to Covid-19 restrictions, they last for only three hours because they need to accommodate delegates across all time zones. To get things moving, a lot of work goes on between the formal meetings.

I am striving to ensure that IBIA keeps an eye on, and takes part in, all IMO activities that touch on issues that have a direct or indirect impact on our members. Without IBIA, the perspective and understanding of the bunker industry may not be heard at the IMO.



***Unni Einemo,* Director, IBIA**
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IBIA EVENTS PROGRAMME 2021

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MODULE 1 TO PURCHASE	Bunker Market Regulations and Enforcement	Online at www.ibia.net
MODULE 2 TO PURCHASE	Understanding ISO 8217 and ISO 4259	Online at www.ibia.net
MODULE 3 TO PURCHASE	Best practice for suppliers with VLSFO	Online at www.ibia.net
MODULE 4 TO PURCHASE	Best practices for users with VLSFO	Online at www.ibia.net
MODULE 5 TO PURCHASE	Adapting to a changing market	Online at www.ibia.net
MODULE 6 TO PURCHASE	Compatibility and stability – Issues with VLSFO fuels and the measurement of Stability	Online at www.ibia.net
MODULE 7 TO PURCHASE	Sales terms and conditions – The purpose, structure and application of Sales terms	Online at www.ibia.net
MODULE 8 TO PURCHASE	Quantity measurement – The principles of quantity measurement including Mass Flow Metering	Online at www.ibia.net
MODULE 9 TO PURCHASE	Sampling – The basics of sampling, sampling methods and sample handling	Online at www.ibia.net
MODULE 10 TO PURCHASE	Fuel quality – Fuel quality, its impact on storage, treatment and use in the engine	Online at www.ibia.net
JUNE		
22	IBIA Webinar: Bunkering Innovation: Digitalisation and its Legal Landscape	Online at www.ibia.net
JULY		
7 - 8	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
8	IBIA Members Meeting	Online at www.ibia.net
28 - 29	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
AUGUST		
4 - 5	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
25 - 26	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
SEPTEMBER		
1 - 2	IBIA Conference Series 2021: Bunkering & Shipping in Transition Part 2 Americas	Online at www.ibia.net
8 - 9	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
22 & 23	2 Days Advanced Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
30	IBIA Members Meeting	Online at www.ibia.net
OCTOBER		
6 - 7	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
14	IBIA Members Meeting	Online at www.ibia.net
27 - 28	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
NOVEMBER		
10 - 11	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
2 - 4	IBIA Annual Convention 2021	www.ibiaconvention.com
24 - 25	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
DECEMBER		
1 - 2	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia
2	IBIA Members Meeting	www.ibia.net
15 - 16	2 Days Basic Bunkering Course (SS600:2014 & SS648:2019)	Singapore, Asia

BUNKERING INDUSTRY EVENTS 2021

JUNE		
25 - 26	Bunker Forum : XIV Russian Forum	Saint Petersburg, Russia
SEPTEMBER		
13 - 17	London International Shipping Week	London, UK
20 - 24	The Oxford Bunker course 2021	Oxford, UK
27 - 30	Seatrade Cruise Global	Miami, USA
30 - 1	ARACON	Rotterdam, Netherlands
OCTOBER		
5 - 6	Marine Energy Transition Forum	Antwerp, Belgium
22 - 24	41st International Bunker Conference IBC	Oslo, Norway
26 - 28	Maritime Week Americas 2021	Panama
NOVEMBER		
8 - 12	Maritime Week Gibraltar	Gibraltar

*All dates were correct at time of going to print but may be subject to change, please refer to IBIA's website (https://ibia.net/events/) for any updates



2021 IBIA ONLINE GLOBAL MEETINGS AND EVENTS

IBIA provides unique digital events where policy-makers, change-makers and leaders discuss challenges, opportunities and possible solutions

This year's conferences started with the **'Bunkering & Shipping in transition' Part 1,** which was held on 12-13 April. This dynamic online conference consisted of a series of sessions with presentations, panel discussions and live Q&As.

We heard first-hand accounts of the latest updates from IMO and what it means for our industry, and highlights of what exactly is changing in Annex VI to progress IMO's initial GHG strategy. In a session on Coping with COVID, we looked at whether business models are changing in 2021 and if we are doing things differently. We heard thoughts on what we can we expect from the Shipping & Freight Markets in 2021. In a session called Understanding VLSFO, our expert panel discussed the impact on fuel quality and operational issues, and whether the ISO:8217 specification is still sufficient. We discussed cleaner-burning fuels and the decarbonisation drive. Digitalisation in the bunker industry was also on the agenda, and we covered credit and risk management, as understanding and dealing with it has never been more critical.

This is an opportunity to thank those who attended and contributed at the **'Bunkering & Shipping in Transition' Part 1.** The support of our dedicated speakers, supporting organisations, the UK Chamber of Shipping and the Turkish Chamber of Shipping, our Bronze sponsor Intertek Lintec, our exhibitors Bunker Metric, Simms Showers and Nereus, our media sponsors *World Bunkering*, Ship & Bunker, Manifold Times, Petrospot and Bunkerspot have been instrumental in this success.

For those who could not make it, we are pleased to inform you that there will be a continuation of this Conference. IBIA will deliver **'Bunkering & Shipping in Transition' Part 2** in order to focus on different markets and time zones such as the Americas. It will take place on **1-2 September** virtually, with panels, one-to-one discussions and networking opportunities. The Conference will host more than 50 speakers and 200 participants, from bunkering production, sales and usage entities, associated services and government agencies, ship owners and operators, bunker suppliers, traders, brokers, barging companies, storage companies, refineries, surveyors, port authorities, credit reporting companies, lawyers, P&I clubs, equipment manufacturers, shipping journalists and marine consultants.

IBIA's agenda will focus on topics such as: IMO Regulatory Changes, Shipping & Freight Markets including Cruising, VLSFO updates, Alternative fuels for Shipping, Bunkering and Digitalisation, and Credit Risk. Also, our members have requested that we host a bunker buyers panel.

Throughout the year we continue organising our monthly **'IBIA Members meetings'**, where we meet and engage with our members, giving them the opportunity to interact with each other, and listen to their views, helping IBIA to represent our industry better. If you are reading this article and you want to be part of these meetings, of this community, you can become a member now. Get in touch with us at ***ibia@ibia.net.***

IBIA also acts as supporting organisation to major events such as the 12th International Fujairah Bunkering & Fuel Oil Forum (FUJCON), Singapore Maritime week, London International Shipping week and many others such as the Bunker Forum in Saint Petersburg in Russia in June. You can find more information about upcoming events in our events calendar and the Diary Apart from our own events, IBIA's Director, Unni Einemo, participated as a panellist and moderator at FUJCON in March, and she took part in two panels at the S&P Global Platts European Fuels conference in May, discussing current and future market challenges in the 'Leaders discuss' panel and pathways to reducing GHG emissions in the 'Future fuels roundup' panel. If you wish IBIA to support your conference/webinar you can get in touch with me directly.

To continue with our events agenda, IBIA will deliver our **Annual Convention** on 2 - 4 November virtually. This is an official invitation to all of you who wish to participate as speakers and/or sponsors and/or attendees in a global environment formulating the future of our industry.

IBIA also runs a series of **online training courses** to inform the members of our industry and help them to understand international regulations, and offer guidance on how best practice and application of international standards can improve their ability to source, supply and use the fuels required now and in the medium term. We are in the pleasant position to announce the preparation of a training course everyone has been waiting for: Alternative Fuels. Keep an eye on our website for the launch date. For more information and to book your course modules, you can visit ***https://ibia.net/events/*** or contact us at ***ibia@ibia.net***

The training modules are aimed at all bunker industry stakeholders who are keen on gaining solid general knowledge of marine fuel. It will be of value to sellers, bunker deliverers, surveyors and ship operators. Delegates will be able to ask questions and seek clarification on any topics covered.

The duration of each module is up to 60 minutes. The modules can be taken as stand-alone courses, however attendees will gain the best value by taking all modules in the order suggested. On completion of a module, delegates will receive the 'IBIA Certificate of Attendance'.

IBIA is dedicated to offering equal opportunities to all our members, creating the perfect environment for content, business and networking opportunities by bringing the bunkering community together.

If you would participate in our Conference as a speaker and/or sponsor you can contact me directly at

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SESSION ONE: IMO Regulatory Changes
Moderator
Panellists
Nigel Draffin
Consultant
Urmi Einemo
Director and IMO Representative
IBIA
Roel Hoenders
Head, Air Pollution and Energy Efficiency
IMO
Steve Simms
Principal
Simms Shower LLP


'BUNKERING & SHIPPING IN TRANSITION' Part 1
SESSION TWO: Coping with Covid
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Panellists
Jack Jordan
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Nicos Rescos
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Business Development Director
SEKAVIN Bunkering Stations S.A.

'BUNKERING & SHIPPING IN TRANSITION' Part 1
SESSION THREE: Shipping & Freight Markets

Moderator



Mustafa Muhtaroglou
Founder
Energy Petrol

Panellists



Peter Ayllott
Director of Policy
Uk Chamber of Shipping



Peter William Beekhuis
Regional Trading Head
Mærsk Oil Trading Singapore Pte Ltd



Charlotte Bucchioni
Associate Editor
S&P Global Platts



Peter Sand
Chief shipping market analyst
BIMCO

'BUNKERING & SHIPPING IN TRANSITION' Part 1
SESSION FOUR: Understanding VLSFO

Moderator



Unni Einemo
Director and IMO Representative
IBIA

Panellists



Douglas Raitt
Global FOBAS Manager
Lloyd's Register



Charlotte Rejgaard
Global Head of Marine Fuel Services
Bureau Veritas VeriFuel



Chris Turner
Manager Bunker Quality and Claims
Integr8 Fuels



Tracy Wardell
Global Technical Manager
Intertek Lintek

SESSION FIVE: Alternative Fuels for Shipping

Moderator



Constantinos Capetanakis
Busker Director
Starbulk S/A

Panellists



Chris Chatterton
COO
Methanol Institute



Sobhith Hariharan
Team Lead - Engineering Systems | Gas Technology Specialist
Lloyd's Register



Dr Edmund Hughes
Director
Green Marine Associates Ltd.



Frederic Meyer
Head of Strategy & Projects
Total Marine Fuels Global Solutions (TMFGS)



Alexander Prokopakis
CEO
probunkers


'BUNKERING & SHIPPING IN TRANSITION' Part 1
SESSION SIX: Bunkering and Digitalisation
Moderator
Panellists
Gabian Chew
Senior Editor
Manifold Times
Tyler Baron
CEO
Minerva
Nikolas Gkikas
CEO & Founder
Nereus Digital Bunker
Dag Lilletvedt
CEO & Founder
Powerzeek
Jeff Mildner
Founder
Vortex Development Group
Christian Plum
Co-founder
Bunkermetric
CAPT. Alok Sharma
Senior Vice President, Business Development
Inatech


'BUNKERING & SHIPPING IN TRANSITION' Part 1
SESSION SEVEN: Credit Risk
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Panellists
Panos Panousis
Managing Director
Infospectrum Ltd
Jonathan McIlroy
Head of Trading - Bunker
Al Ghurair Energy
Lars Holmberg Nielsen
Executive Group Director
BMS United Bunkers
Sinan Utlu
Senior Credit Manager
Monjasa
Joe Zhou
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JOIN US

- IBIA MEMBERSHIP BENEFITS -

By joining IBIA you will become part of a global network of bunker industry experts who collectively form one of the world's leading authority on bunkers. Not only will you have access to a wealth of information and insight (we publish newsletters and industry updates on current issues) which offer pragmatic advice for managing the industry's challenges; members also have the potential to shape and influence both international and local legislation. This happens through IBIA's Working Groups which are responsible for developing industry guidance, participation in IMO correspondence groups, solving long-term industry issues, and addressing both commercial and technical aspects.

INDIVIDUAL £250

- IBIA Board Member eligibility
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IBIA
INTERNATIONAL BUNKER INDUSTRY ASSOCIATION

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- 15% discount for 3 years membership. (Paid in one instalment) – Guarantee no membership price increases for the next 3 years.
- Unregistered offices will not get IBIA benefits

If you are interested in becoming an IBIA member please contact ibia@ibia.net or visit www.ibia.net


Port Louis, Mauritius 2015

IBIA AFRICA OFFICE CELEBRATES 7 YEARS

We take a fond look at the past seven years as we prepare for the next chapter

IBIA Africa has covered much of the African continent in the seven years since this regional office was set up in April 2014. We have hosted several conferences, training sessions and attended many industry engagements. We have dedicated our report in this issue to a pictorial review of our members, events, and activities to celebrate these first seven years. A thank you to all those who sponsored, participated, and have given their time to IBIA Africa and its growth. In particular, we would like to thank long- serving IBIA Member Patrick Holloway (Partner, Webber Wentzel) for his dedication and continued service to IBIA and the bunkering industry, both locally and globally. Patrick has served as IBIA Africa Executive Committee Member and IBIA Global Board Member, and while his term on the Board has recently come to an end, he remains an active member and important historical resource for IBIA Africa as we anticipate the announcement of the upcoming new Interim IBIA Africa Regional Board.

We would like to encourage our regional members to engage with the Africa office as we finalise our Interim IBIA Africa Regional Board. This board will comprise of five Africa members covering not only the large range of services provided in the bunkering sphere but include representation from as many of the countries who engage in port and bunkering activities around the African continent as possible. We will be co-opting the Interim Board in the next few weeks and expect an announcement to be made before the end of Q3.

The purpose of the Regional Board is to facilitate and ensure that the interests of the Africa bunkering industry are truly represented regionally, and feed into the Global Board for IBIA. Our goals and aims for the Regional office will be to increase and broaden our reach through encouraging new members, online member meetings, engaging with legislative bodies and ensuring dissemination of vital IMO information to our membership.

IBIA Africa's aims remain aligned with IBIA's global approach:

- To provide an international forum for bunker industry issues.
- To represent the industry in discussions and negotiations with national and international policy makers, legislators and other groups and bodies.
- To review, clarify, improve, develop and endorse where appropriate, industry methods, practices and documentation.
- To increase the professional understanding and competence of all who work in the industry.
- To provide services and facilities for members and others as the Board shall from time to time consider appropriate.

Should any of the Africa Membership wish to engage further regarding the above, you are encouraged to contact me directly.

We would like to take this moment to warmly thank our Africa Membership for your support and continued dialogue.

If you would like to engage with the IBIA Africa team, or become a member of IBIA, explore opportunities to be a speaker, sponsor or find out more about our local activities, engagements and events, please contact me.

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Tahra Sergeant


Cape Town, South Africa 2015


Port Louis, Mauritius 2016


Lawhill Maritime School, South Africa 2017


Cape Town, South Africa 2017



Port Louis, Mauritius 2018



Tenerife 2019



Training, Tenerife 2019


Cape Town, South Africa 2019


Cape Town, South Africa 2018


Cape Town, South Africa 2019


Port Louis, Mauritius 2017


Cape Town, South Africa 2019


IBIA Africa AGM 2015


Patrick Holloway. Partner, Webber Wentzel

IBIA CODE OF ETHICS

IBIA is appealing to all of its members to join this important initiative by showing support for our Code of Ethics. It's an aspirational statement and an important step towards our aim of promoting the adoption of a common set of ethical values across the industry. We believe that when the entire industry acts with the highest ethical standards that this will be to the benefit of us all.

FAIR BUSINESS

- We conduct our business in a fair and transparent manner
- We will always act in the best interest of each business partner and are honest with the stakeholders involved in our business
- We only engage in business using compliant products, and deliver the quality and quantity agreed with our business partners
- We always act in good faith

BEST PRACTICE

- We always act in accordance with applicable legislation, including sanctions
- We always meet contractual obligations in a timely manner
- We always do our best to avoid disputes and seek resolution promptly if disputes occur
- We comply with all applicable competition and anti-corruption laws
- We respect confidential information and do not unlawfully use any intellectual property

SOCIAL RESPONSIBILITY

- We seek to minimise our environmental impact and the risk of environmental damage
- We will always ensure employees' health, safety and security
- We offer equal opportunities, prohibit unlawful discrimination and respect human rights
- We offer the same opportunities for professional development to all our employees

TRANSPARENCY

- Our accounts and records are kept accurately and reflect the true state of the company and its operations
- During audits or investigations, we fully cooperate with the authorities
- We will not receive or give any gift or entertainment of disproportionate value
- We are fully committed to preventing both money laundering and terrorist financing

To sign up for the Code of Ethics working group email **ibia@ibia.net**

LIVING AND WORKING WITH COVID-19

IBIA Asia continues work on ambitious plans for 2021 to meet industry needs

As I write this, Singapore is experiencing its 2nd wave of the Covid-19 pandemic, caused mainly by the new strain first identified in India. It has caused widespread cases in the community. The Singapore Government implemented a Heightened Alert, similar to a lockdown, with effect from 16 May to 13 June 2021. As a result, the IBIA Asia office has had to close to visitors for a while and postpone all scheduled physical classroom training at the IBIA Asia premises, but we are ensuring that all affected registered trainees are updated and informed. We look forward to welcoming visitors and trainees back when circumstances allow.

Events and potential new IBIA Asia courses

At the time of writing we are preparing the first IBIA Asia Webinar entitled "Bunkering Innovation: Digitalisation and its Legal Landscape", scheduled to run on 22 June 2021.

We are also looking at two new potential courses:

- LNG Bunkering course. IBIA Asia will work with Singapore Metrology Organisation on this.
- TR 80:2020 - Technical Reference on meter verification using the master mass flow meter. IBIA Asia is currently working with a reputable specialist to deliver this course.

We are targeting to have the details ready in time to roll both these courses out in Q3 or Q4 2021.

Partnership projects

IBIA Asia is working on a Memorandum of understanding (MoU) with Singapore Chamber of Maritime Arbitration for close project collaboration, and target to roll this out in the third quarter (Q3) of 2021.

Technical Committee participation

IBIA Asia is sitting on both the Bunkering and the LNG Bunkering technical committees of the Singapore Chemical Industry Council, where the aim is to drive and be part of the Singapore Standards for Bunkering for conventional fossil fuels and alternative fuels like LNG.

Currently, we are reviewing the SS 600- Singapore Standard Code of Practice for Bunkering and the SS 524- Singapore Standard Specification for Quality Management for Bunker Supply Chain (QMBS). The target is for both to be completed by Q4, 2021.

Current Training Programme

The IBIA Asia office offers mandatory training for the bunker sector in Singapore with courses that have been approved and certified by the Maritime and Port Authority of Singapore (MPA). They are:

- Singapore Standard SS648:2019 - 1 Day Training for currently approved Bunker Surveyors and Cargo Officers. In 2020, we conducted the training for 90% of certified cargo officers and bunker surveyors.
- Singapore Standard SS 600:2014+ SS648:2019 - 2 Days Basic Training for new Bunker Surveyors and Cargo Officers.
- Singapore Standard SS 600:2014+ SS648:2019 - 2 Days Advanced Training for new Bunker Surveyors and Cargo Officers.

Courses were approved by MPA in May 2020 on the Maritime Cluster Fund grant of up to 90%, up from 70% earlier, for eligible trainees on courses taken between 1 May 2020 and 31 December 2020.

The enhanced co-funding support under the MaritimeSG Together Package has **been extended to 30 June 2021**. After that, **90% funding support** for MPA pre-approved mandatory bunkering course reverts to **70%.**

The IBIA Asia office also offers specialised training for the bunker sector in Singapore with our MPA-approved course, **Understanding Marine Fuel.** Two successful live on line-courses taught by IBIA Asia Regional Manager Alex Tang were completed in October and November 2020. IBIA Asia is planning to hold this course in July and November 2021.

MPA has approved a Maritime Cluster Fund grant of up to 50% for eligible trainees for this course.

Interested parties are encouraged to contact Noraini noraini@ibia.net or Alex Tang regionalmanagerasia@ibia.net.

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Alex Tang

NEW MEMBERS

CORPORATE A

Duane Rowan
Sensia Global
Americas

Service, Surveyor
Tan Teng Hian
CCIC Singapore Pte Ltd
Asia

Supplier, Ship Owner
Desmond Chong
Kenoil Marine Services Pte Ltd
Asia

CORPORATE B

Service, Surveyor
Seow Wee Seong
CCIC Middle East FZE Co. Ltd
Middle East

INDIVIDUAL

Service
Vernon Jayanathan
Maritime Recruitment Company Ltd
Europe

Service
Stamatios Xochakis
Tsakos Shipping & Trading SA
Europe

Surveyor
Karim Mchich
Mchich Mohamed Ltd
Africa

Service
Dag Lilletvedt
Powerzeek AS
Europe

Service
Michael Banning
Exponent
Europe

Emanuele Gallone
Uniper Energy DMCC
Middle East

Patrice Maury
Celero Ltd
Africa

Jesper Christensen
BlackCoral Energy Sarl
Europe

Port Authority
Ron Van Gelder
Port Of Rotterdam Authority
Europe

Supplier
Umar Girei Dahiru
Levant Atlantic
Africa



IBIA SUPPORTS LOCAL NEEDS WITH THE FORMING OF REGIONAL BOARDS

As a member-led organisation focused on the development and the improvement of the bunker industry, IBIA's value is directly correlated to members' engagement and to the value they bring

We are privileged to have a very diverse membership base, that includes players regardless of their size, their location, and their specific type of activity within the bunker industry. All our members can contribute to the achievement of IBIA's goals with their know-how, their particular expertise, and their initiatives.

One of the challenges of Global organisations like IBIA, that play an active role in global industries like shipping, is to be able to identify global trends, while not losing sight of local dynamics, that in the bunker world are incredibly relevant. With this challenge in mind, the IBIA Board of Directors embarked 2 years ago in a strategic review that brought us the creation of a structure based on a Global Board as well as 5 Regional Boards in Asia, Africa, Middle East, Europe, and Americas.

We have 1 active Interim Regional Board (Asia) with Africa, and Americas Interim Regional Boards being finalised by the end of 2021, and we plan to get the remaining two Regional Boards (Europe and Middle East) going in the next 12 – 18 months. These Interim Regional Boards will allow for growth and development within the regions, until such time as democratically elected Regional Boards are put in place.

Regional Boards comprise of 5 members, based in their respective regions, and focused on priorities such as liaising with local authorities, generate content and training relevant for local players, and organise regionally focused events.

What is particularly interesting about Regional Boards is that they will follow a normal election process (similar to what happens for the Global Board) and the elected Regional Board Chairman, will automatically have a seat on the Global Board, hence ensuring regional representation when it comes to setting IBIA's Global strategy.

Our call to action: Get involved and engaged. Take an active role in setting the direction that IBIA will follow and take the opportunity to do so by being part of a Regional Board, in the area where you are based. Our shared desire to have a positive impact on the bunker industry and to dedicate our time and effort to it is what makes IBIA special.



Timothy Cosulich
CEO, Fratelli Cosulich Group of Companies
IBIA Board Member and Vice Chairman



IS IT SAFE?

Getting fuels from the bunker tank to the engine for combustion without incident isn't always straightforward. Apart from the environmental impact of bunkers, the IMO is now also looking more closely at fuel safety. IBIA's IMO Representative Unni Einemo explains what is going on

In the run-up to the 0.50% sulphur limit under MARPOL Annex VI taking effect, many concerns were raised that the change in fuel quality to comply with "IMO 2020" would have a detrimental impact on ship safety.

MARPOL is dealt with by the IMO's Marine Environment Protection Committee (MEPC), but concerns about fuel quality led to the IMO's Maritime Safety Committee to take on an agenda item called "Development of further measures to enhance the safety of ships relating to the use of oil fuel." The work on this agenda item has, in the first instance, focused on the flashpoint limit of 60°C stipulated in the International Convention for the Safety of Life at Sea (SOLAS). After that, attention will turn to "oil fuel parameters other than flashpoint".

So where are we with all this? Will it get us closer to the aim of enhancing the safety of ships? There are conflicting views on how to best achieve that goal. One part of it is to prevent supply of bunkers that fails to meet the SOLAS flashpoint limit or contain substances deemed to put ship and crew safety at risk. Another part of it is to ensure good fuel management and safety procedures on ships.

Many shipping organisations with consultative status at the IMO, and several Member States, want regulations targeting the supply side to prevent fuels below the SOLAS limit from being supplied to ships in the first place, and to ensure suppliers face consequences if it still happens.

How big is the problem?

A fuel with flashpoint below 60°C is not only outside ISO 8217 specification, it is also a breach of SOLAS regulations, and hence is regarded as a critical parameter with 'off-specs' getting a lot of attention. In the course of deliberating flashpoint regulations at the IMO, IBIA, with the assistance of our Technical Working Group, has looked into the subject in detail, including a variety of studies and data.

Fuel testing agencies have data on flashpoint from fuels actually delivered to ships. While statistics vary a little between them, ISO/TC28/SC4/WG6, the ISO committee in charge of ISO 8217, has recently gathered data from most of the major testing agencies, which should give a fair overall representation.

The ISO comparative study showed that for the first half (H1) of 2020, there had been a small increase in distillate marine (DM) fuel samples with a flashpoint of below 60°C compared to during all of 2018, but it was still below 1% of all DM fuel samples. It found that 99.9% of very low sulphur fuel oil (VLSFO) residual marine samples had a flash point meeting the 60°C limit, and that 0.08% had a flash point between 55°C and 60°C.

In both 2018 and H1, 2020, more than 99.5% of HSFO samples met the 60°C flashpoint limit. Overall, it seems VLSFOs have been no more prone to off-spec flashpoint than HSFOs used to be, while the share of DM samples below the limit showed a small increase during 2020.

Interestingly, an information document submitted to IMO by China (MSC 102/INF.18), reporting on lessons learned from three explosions in fuel oil tanks and two explosions of components of fuel oil booster unit/systems, showed that only one of those cases related to a fuel with a flashpoint below the SOLAS limit, reportedly measured at 37°C. In the other cases, the flashpoint had been measured above, and in some cases well above, 60°C.

The paper drew a clear causal link between the fuel with the flashpoint measured at 37°C and an explosion in a fuel oil storage tank, but the explosions in the other cases were linked to other factors. In the case where the flashpoint was measured at 37°C, it was reported that there was no flame screen fixed in opening of the oil mist box, and that moving flames ignited vapour after the fuel oil in the storage tank was heated. Incidents caused by low flashpoint fuels, fortunately, appear to be very rare. IBIA has previously obtained information from Lloyd's Register that it has no records of incidents caused by low flashpoint fuels from 1970 and up to 2010,



only for autoignition point. There were cases of fuels testing below the 60°C flashpoint limit during this period but they do not appear to have caused any incidents.

For flashpoint (FP) to be the cause of a liquid to ignite, there needs to be a significant concentration of accumulated vapour and an ignition source, e.g. a spark or open flame. This combination is rare as long as normal safe working procedures and maintenance are observed.

Accumulation of flammable vapour from oil fuels, to the extent that it represents a fire-risk, will be limited to enclosed spaces with lack of ventilation. Explosive vapours may form inside fuel tank headspaces but this is a known risk and therefore safety procedures and tank design are well established around venting and avoidance of ignition sources nearby.

Back in 2014, the 94th session of MSC was assessing a proposal to reduce flashpoint limit in SOLAS chapter II-2 from 60°C to 52°C for marine distillate fuels. Ultimately, that proposal was rejected for various reasons, including safety concerns but also because the 60°C limit is now embedded across so many global regulations that it would be almost impossible to untangle it.

There was, however, some very interesting information coming through. Document MSC 94/18/5 explained that the SOLAS flashpoint requirement for oil fuel was reassessed by the IMO's Sub-Committee on Fire Protection (FP) during its consideration of the fire safety of future passenger ships in 1966-1967. At that time, it was proposed that the minimum flashpoint requirement for fuel should be changed from 43°C to 60°C. The change, which was accepted, appears to have been based on a general qualitative safety improvement rather than a systematic analysis of fuel properties or known risks or casualties.

So, we are stuck with the 60°C SOLAS flashpoint requirement, although review of fire casualty records shows that the majority of machinery space fires are the result of loose or broken fuel line fittings that allow pressurized fuel to spray onto heated surfaces. In this situation, the potential ignition of the fuel spray is governed by the fuel's autoignition temperature and not its flashpoint. The auto-ignition temperature for all marine diesel fuels is generally accepted to be 250°C, and will not be affected by a change in flashpoint.

Current status

Efforts have been underway at the IMO for some time on the fuel oil safety issue, but the postponement of many IMO meetings in 2020 due to the Covid-19 pandemic, and time constraints once virtual meetings were set up, has slowed things down. Progress was made, however, at the 103rd session of the MSC (MSC 103) in May 2021.

After a week of intense debate at MSC 103, where IBIA had an active delegation supported by industry experts from our technical working group, some elements of the additional regulations under SOLAS are now near completion and on course for approval at MSC 105, which is expected to meet toward the end of the second half of 2022. MSC 103 re-established a correspondence group (CG) to continue this work, which will report to MSC 105 as there's not sufficient time to have the CG finalise the work prior to MSC 104, which will meet later this year.

The CG has been instructed to:

- Further develop, with a view towards finalization, draft SOLAS amendments relating to reporting of confirmed cases where oil fuel suppliers have failed to meet IMO flashpoint requirements.
- Draft SOLAS amendments on actions against oil fuel suppliers that have been found to deliver oil fuel that does not comply with minimum flashpoint requirements.
- Further develop mandatory requirements regarding the documentation of the flashpoint of the actual fuel batch when bunkering.
- Further develop guidelines for ships to address situations where indicative test results suggest that the oil fuel supplied may not comply with SOLAS regulation II-2/4.2.1 (which says that no fuel oil with a flashpoint lower than 60 degrees Centigrade shall be used, unless specifically permitted).
- Collect information on and consider possible measures related to oil fuel parameters other than flashpoint.

After MSC 103, the items which are closest to completion include a requirement for Contracting Governments (i.e. signatories to SOLAS) to report confirmed cases where oil fuel suppliers have failed to meet the requirements specified in SOLAS regulation II-2/4.2.1 (including a definition of confirmed cases) and to "take action as appropriate" against suppliers that have been found to deliver fuels that do not comply with SOLAS.

On the subject of mandatory requirements regarding documentation of the flashpoint of the actual fuel batch when bunkering, the majority view appears to support requiring that suppliers should report the actual flashpoint of the fuel delivered to the ship, similar to the MARPOL requirement for reporting the actual sulphur content on the bunker delivery note. Another alternative would be for the BDN to contain a declaration that the oil fuel supplied is in conformity with the SOLAS II-2/4.2.1 regulation.

IBIA has been questioning, during our input at IMO on the subject, whether this will make a difference given that suppliers already have to provide a material safety data sheet (MSDS) to the ship, which should guarantee that the fuel meets the SOLAS flashpoint limit, and because the supplier has also entered a contractual obligation to meet the flashpoint limit as fuels are largely sold against ISO 8217 specifications, which include a 60°C flashpoint limit.

At MSC 103, IBIA highlighted that we have yet to hear a good reason for requiring the actual flashpoint to be reported to the ship, as opposed to a statement that it meets the 60°C limit, because operationally the actual flashpoint should not matter; normal safety procedures still need to be applied. IBIA also explained that it is common practice during fuel testing to determine flashpoint, to stop the test once the sample has been heated to 70°C or above, because that suggests that the 60°C limit has been met and no further testing is considered necessary.



As such, the practical considerations and consequences do not appear to merit requiring an actual flashpoint value to be documented.

IBIA also commented on a proposal by ICS and the Cook Islands in MSC 102/6/2 to require a representative sample for the purpose of testing flashpoint to be taken at the time of delivery, which seeks to mandate the sampling location at the ship's inlet manifold. IBIA told MSC 103: "This goes beyond the provisions for the MARPOL delivered sample, which is a guideline. The realities of bunkering operations means that it is often unsafe for a representative of the fuel supplier to come aboard the ship to witness sampling at the ship's inlet manifold, and it is also usually impossible to monitor remotely as the ship's inlet manifold will be completely out of sight from the bunker delivery vessel. Conversely, it is often possible to view sampling at the bunker outlet manifold from the deck of the receiving vessel, making this both safer and more practical."

What was clear during these discussions was that there is strong desire to put more responsibility on the supply side to provide compliant fuels, but limited understanding of how testing for flashpoint actually works. Any justification for requiring an actual value to be reported as opposed a statement that it is above 60°C is vague.

What if?

Another part of the work on the fuel oil safety agenda item at MSC is developing "guidelines for ships to address situations where indicative test results suggest that the oil fuel supplied may not comply with SOLAS regulation II-2/4.2.1 (which says that no fuel oil with a flashpoint lower than 60 degrees Centigrade shall be used, unless specifically permitted)."

At MSC 103, IBIA told the committee: "Fuels testing below 60°C are relatively rare and, unless the flashpoint is significantly below the 60°C limit, normal safety procedures prevent accidents. To our knowledge, no accidents have been reported as a result of a flashpoint measured a few degrees below 60°C. When fires or explosions have occurred, it has been due to other factors. Moreover, safety procedures and equipment must surely be designed to tolerate flashpoint slightly below the limit, in the same way that all safety systems are designed to withstand conditions beyond a specified limit. You would not expect an elevator with a sign that its maximum capacity is 1200 kg to suddenly start falling dangerously fast if the load goes to 1300 kg.

"In fact, when ship operators receive a test result indicating a flashpoint slightly below 60°C they see the risk as manageable. Their main concern is that they are now potentially in breach of the SOLAS regulation. This puts the ship in a very difficult position as it has implications for the ship's insurance and class status.

"With this in mind, we urge the Committee to develop guidelines in line with pragmatic and workable measures which are already widely used, in cases where ships have indicative test results suggesting that the fuel as supplied is slightly below the limit. Debunkering is not a trivial matter and could in fact create a bigger risk to the safety of the ship and crew than venting the tank to allow the volatile elements causing the flashpoint to test below the limit to safely evaporate. In the majority of cases, venting and then retesting of fuel in the tank onboard has been shown to bring the flashpoint into compliance with the SOLAS limit. We strongly believe this would be in the best interest of all parties concerned. We believe this approach would also address the concerns raised in paragraph 8 to 10 of MSC 103/6 and the proposal in paragraph 16 of MSC 102/6/1."

The comments IBIA referred to from MSC 103/6 said: "Japan is specifically concerned that some required measures may cause deviation of the ship's voyage from the planned route or undue delay of the voyage resulting in a negative incentive for carrying out the ship's voluntary tests," which would be undesirable, and so "measures taken in case of indicative test results obtained from the ship's own tests, should be thoroughly deliberated ".

Meanwhile, paragraph 16 of MSC 102/6/1 by China, noted "the possible implementation difficulties in de-bunkering non-compliant fuel oil" and that a proposal requiring to debunker non-compliant fuel oil needs to be carefully considered.

The guidelines will be further considered in the Fuel Oil Safety correspondence group, which IBIA participates in. In addition to IBIA's pragmatic proposal, the working group on fuel oil safety at MSC 103 prepared a list of items to be addressed by the guidelines. They include Proof of non-compliance (e.g. second independent test, testing plan) communication (what information, who must be informed) and relations with various authorities. The list also includes items such as fuel handling, fuel properties and hazards.

The working group agreed that provisions on measures that could affect the planned voyage of a ship should be considered carefully, taking into account the severe implications for the ship, crew and owner as well as the actual risk emanating from the use of fuel with a flashpoint below 60°C in the specific case.

'Other parameters'

MSC 103 in May 2021 had only a brief discussion on "other parameters", as development of flashpoint measures took up most of the available time. A work plan was drawn up for items to be progressed, much of it closely related to the development of the ISO 8217 fuel quality standard. Items the IMO wants to look at more closely to enhance the safety of ships include fuel oil stability, compatibility, cold flow properties, acid number, cat fines, the use of low viscosity fuels, and finally the most complex aspect regarding "unusual components" in fuel oil.

Several informative documents have been provided to the IMO's work on this subject, including the Joint Industry Guidance document published in September 2019 called "The Supply and use of 0.50% – sulphur marine fuel" which IBIA took part in developing.

This document highlights that, apart from the responsibility of suppliers in providing fuels that comply with IMO regulations and meet ISO 8217 specification, onboard fuel management is critical. The huge variability in IMO 2020 compliant fuels, especially with regards to key handling characteristics such as viscosity and cold flow, along with increased risk of fuels being incompatible with other fuel batches, means diligent onboard fuel management is probably more critical than ever to ensure the fuel reaches the engine without incident.

Supplier licensing

One element that was discussed at MSC 103 was a call for implementing licensing schemes for bunker suppliers, which some Members States insist is necessary while others are not in favour or convinced it is the best strategy. The outcome was an agreement that MSC "invited Member States to consider the implementation of licensing schemes for bunker suppliers operating in their jurisdiction", with a reference to the need for collaboration with MEPC.

At the time of writing, the 76th session of the IMO's Marine Environment Protection Committee was due to consider an "indicative example" for a voluntary Member State licensing scheme for bunker suppliers. A proposal submitted by a group of shipping organisations has been considered and developed further in a correspondence group, which IBIA has taken part in.

If approved, the indicative example of a bunkering licence will be added as an annex to the official IMO Guidance for best practice for Member State/coastal State (MEPC.1/Circ.884). IBIA is in favour of bunker supplier licencing schemes and while the indicative example in the Appendix provides a possible framework, we also note that it may not be fit for purpose in all Member States. They may wish to use the indicative example, or adapt it for their use, or they may prefer such licensing to be undertaken by local authorities.



BUNKERING HAS "CHANGED FOREVER"

Last year's merger of KPI Bridge Oil and OceanConnect Marine created one of the largest global independent marine energy service and solutions providers. David Hughes asks KPI OceanConnect's CEO, Søren Høll, how he views the future of the bunkering sector

David Hughes (DH): In what ways is the global market changing?
Søren Høll (SH): Eighteen months ago, the arrival of IMO 2020 was expected to be the biggest challenge shipowners, operators, and bunker suppliers would face that year. Some experts predicted that it was going to be as substantial as ships' switch from coal to oil in the early 20th century. While there have been fewer issues than many expected, the global sulphur cap has nevertheless changed the way we bunker forever.

IMO 2020 has created an inherently more complex marine fuels landscape. Safety, compatibility, and regulatory compliance have become more interlinked than ever before, and finding the right fuel, at the right time, for the right vessel has become much more challenging. Price is still an important consideration, but there's now more to consider to ensure you're maximising the efficiency and utilisation of your ships.

Last year saw substantial bunker price volatility. This presented a textbook example of why cutting corners on hedging and procurement strategies doesn't pay in the long run. In Rotterdam for example, VLSFO fell from roughly US$600 per tonne in January 2020 to $150 per tonne in May 2020. By May 2021, we had VLSFO with averages closer to $500 there. In these challenging situations, a counterpart with the knowledge, trust and global coverage to navigate through these periods that we'll continue to endure is essential.

DH: What does that mean for the various players in the market?
SH: We saw that many companies were 'saved by the bell' in 2020, but we wouldn't be surprised to see more consolidation in the industry as the dynamics many expected in early 2020 re-emerge this year.

The interlinked demands of credit and creditworthiness, as well as the higher cost of IMO 2020 compliant fuels, made it more difficult for smaller firms to keep doing the same level of business with their existing credit lines. When Covid-19 emerged, risks across the supply chain increased and some of those who didn't have adequate risk management became insolvent.

The industry has seen a decline in capital availability for all but the strongest players. This is primarily the effect of large banks ABN AMRO and BNP Paribas pulling out of commodity trade finance altogether, which has created additional costs, liquidity and transaction complexities for shipowners, and bunkering companies, and is something that's likely to continue this year.

Managing risk effectively will require many players in the bunker industry to change their business models significantly. Unless they have expert local and technical knowledge, financial strength, and global coverage they're going to find it very difficult to thrive in this new era.

DH: What effects has Covid-19 had on bunkering?
SH: First and foremost, I'm enormously concerned about the seafarers who have become collateral damage of the pandemic. Mariners are the lifeblood of global commerce, and far too many of them are still stranded on vessels, and there haven't been enough vaccinations.

This is a humanitarian issue, but exhausted sailors also increase the risk of accidents that could harm them or the environment. What we need is for national governments to work together to solve this crisis, and great work is already being done, such as the Seafarers' International Relief Fund - a united appeal by the global shipping industry to deliver urgent support to seafarers and their families in India.

Beyond the impact on seafarers, demand in major ports – where we are focused – has been resilient so far, and we expect it to continue. For example, Singapore's bunker sales fell below 4 million tonnes in May and June in 2020 but rebounded to over 4.1 million tonnes in July and August – which outperformed the volumes posted for the same months in 2019. Nevertheless, overall volumes are clearly down year-on-year, and some sectors, especially cruise, have been more affected than others.

As previously mentioned, it's clear that many smaller companies weren't in good health last year and this is due at least in part to Covid-19. Over the last three years in Singapore alone, there have been plenty of insolvencies, liquidations, and one-way trips to judicial management. This includes at least four firms that were once frequently in the Lion City's annual top 20 bunker suppliers by volume. However, these issues extend well beyond Singapore, and it is a credit to the MPA's enforcement that the overall quality of bunkering in the region is improving year on year.

We also cannot forget the challenges on the supply side, notably the disagreements within OPEC+ over how much crude oil to produce, which led to a huge surplus just as demand started to fall. Some agreements have been made and OPEC has decided to move forward with a planned gradual crude production increase. It remains to be seen how much impact the recent decarbonisation and sustainability developments at majors like Chevron, Exxon, and Shell affect long term crude supply.

In addition to these challenges, the reality is that counterparty risk assessment has become more important than ever. If you're not doing your due diligence to ensure that you're working with a credible supplier, you're putting your company at tremendous risk in a market as volatile as this one.

DH: What are the short to medium-term prospects for the various sectors of the supply chain?
SH: It continues to be true that the shipping industry is the glue holding the globalised economy together. Its fundamental importance is not going to change any time soon, but the value drivers may well do. Most vessel sectors have had excess capacity in recent years. However, thanks to a confluence of circumstances, it now seems as though the majority of shipping sectors can look forward with cautious optimism for the next 12 months – and perhaps even further.

Decarbonisation is likely to be the biggest shift for our industry in the medium term. Indeed the changes we face today as we sail towards the IMO's 2030 and 2050 targets are likely to substantially change the supply chain. There are multiple pathways to achieving these ambitions, and there will be a mix of different solutions and fuels. But the big question remains around infrastructure, and what type of alternative fuel is actually possible to facilitate and make available in certain regions. We're working with several partners to ensure that our counterparts are always able to find the right fuels in the right locations for their ships. This is reinforced by our commitment to decarbonisation and creating a more sustainable future for our industry, and the world. We recently completed our first carbon offset transaction with a US-based client, and we're actively exploring other pathways to enhance the sustainability of our client's marine fuel procurement.

DH: In the longer term, how do you see the market changing as shipping moves towards zero carbon?
SH: For us, IMO 2020 was just the beginning, and we expect to see a transformation in the shipping industry in the coming years. The dual impact of IMO 2020 and Covid-19 have changed the marine fuel ecosystem. There will be no shortage of challenges in our future, but counterparty risks shouldn't be one of them, and in an evolving era of change it is incumbent upon every player to choose who it partners with wisely.

The shift towards future fuels and alternative sources is growing, and we're fully committed to providing shipping with the energy it needs to run its fleets sustainably. As a marine fuels partner, we have a responsibility to guide our customers through these transitionary periods, and we will provide the best solutions for their fleet through our trusted and knowledgeable expertise. We're exploring the development of different fuels, and fully expect our bunker sales mix to be very different in 2030 and 2050, including biofuels and perhaps LNG. We already have partnerships with some clients where we also look into how we can innovate and add value to the targets in the value chain, for 2030 and 2050.

DH: What are the implications for suppliers and shipowners?
SH: As the world returns to normal, or the new normal, we're expecting shipowners and operators to face significantly more complexity. It's clear that compliance, compatibility, and safety have become more interlinked than ever before, so owners and operators need to be confident that their partners can deliver beyond the basic price of the product, and provide value through their specialist knowledge and expertise.

Rather than having one pathway to meet decarbonisation, there will be an array of different fuels for shipowners to choose from, and this will require financial and technical guidance from their counterparts. We expect that the marine fuels mix will soon be very different, and we're open-minded about expanding our offering beyond traditional fuels. I also believe that they'll call for more transparency, so having partnership-based relationships built on trust will unlock greater opportunities for all parties involved.

As a prime mover and agile partner, we're well positioned at KPI OceanConnect to support our business partners to thrive in this new marketplace by providing the best solutions in response to the increasingly diverse and complex nature of the market, and meeting the new demands of our business partners. I'm confident that we have the vision, experience and flexibility to ensure that we can continue to meet our customers' more complex needs, and provide them with the right counsel to empower them in navigating the industry's transformation.


Søren Høll



MORE BUNKER CALLS AT GIBRALTAR

Rock sees marine fuel supply sector pick up despite absence of cruise ships

Port of Gibraltar has announced that 1,793 vessels called at the Western Mediterranean hub for bunkers during the first four months of this year. This is higher than the 1,691 calls recorded for the equivalent period in 2020.

A total of 496 vessels arrived at the Port of Gibraltar for bunker supply during April, which was the highest recorded monthly total since October 2019.

This figure represents an increase of 56 calls, a 12.7% rise compared to April 2020, and is up by 19 calls on the March 2021 figure. The port no longer publishes details of bunker sales volumes.

In total 782 vessels in total called at Gibraltar in April 2021. This was 73 more than the 709 calls in April 2020, and 27 more than the 755 calls recorded for March this year. Total gross tonnage for all vessels in April was 22,374,107, a 7.7% increase on 2020 despite the absence of cruise ships, which normally form an important part of the port's business.

Gibraltar has been Covid-19 free since April and is on the UK government Green List for air travel.

Volumes increase at Singapore

Total bunker sales in Singapore for the first five months of 2021 totalled 21.2 million tonnes, up slightly on the same months in 2020. Most sales were of VLSFO but with HSFO taking about a quarter of the total.

Meanwhile the number of Maritime and Port Authority of Singapore (MPA) licensed bunker suppliers has reduced by one, to 42. This follows the departure from the list of licensed suppliers of what was the second smallest firm, A DOT Marine, on 1 June. The company only supplied MGO.

Vitol launches global bunkering service & emission offsets

Major energy and bunker trader Vitol has launched Vitol Bunkers, which will "offer ship and fleet owners worldwide access to high quality marine fuels, blended to meet required specifications".

The company's Global Bunkering Account Manager Chris Young, commenting on the April launch, said: "Vitol has for decades been a leading global trader in bunker fuels. Today, we are excited to be extending our services and we look forward to delivering the highest quality marine fuels to new and existing customers, across key locations."

Vitol charters 6,650 ship voyages a year and has over 250 vessels at sea transporting its cargoes at any one time. Vitol manages its own fleet of vessels through its Latvian-based technical management company, LSC, as well as through a Singapore-flagged fleet offering barging services.

Vitol Bunkers announced that its customers will be offered the opportunity to cancel emissions associated with any given cargo through the overlay of Verified Emissions Reductions (VERs). It said: "The VERs will conform to the highest international standards and will be sourced from Vitol's existing portfolio and the wider market and emissions will be calculated using IMO and EU guidelines. Customers will be offered a range of offset solutions to enable them to align mitigation with their broader emissions reduction programme and a fully bespoke programme will be available for customers wishing to deploy this strategy at scale."

Young said: "Shipowners are keen to be part of the climate solution. Offsetting will be key to enhancing the sector's environmental performance and we are delighted to be able to combine our expertise in two core areas and launch this compelling offering."

Peninsula renews credit facility

Major bunker and energy supplier Peninsula has confirmed the renewal of its syndicated $350 million European credit facility. The facility includes an increase in a two-year committed tranche from $140 million to $210 million,

representing, the company says "the syndicate's continued endorsement and confidence in Peninsula's business model".

RBS remains as facility agent together with HSBC, Bankinter, Lloyds and UBS as existing lenders. The renewed facility sees the introduction of another top tier participant, Citibank, to the lending syndicate.

The company commented: "During the Covid-19 pandemic there has been a tightening of credit conditions in the market, with several banks pulling out of facilities and reducing exposure to the energy sector. In spite of this, Peninsula has successfully diversified its lending relationships while also strengthening its overall liquidity position."

John A Bassadone, CEO of Peninsula said: "The renewal of our European credit facility marks another important milestone in the execution of our strategy bringing another two years of additional access to liquidity and increased committed lines. The support we continue to receive from the banking sector shows trust and comfort in our model. It differentiates us in the market and compliments the high standard solutions that our customers expect from Peninsula".

Peninsula's transparency and conservative risk management approach puts it among the most trustworthy and responsible companies in the marine energy space. This has been at the core of Peninsula's corporate values over the last 25 years.

The renewal of the European credit facility follows Peninsula's strategic partnership with Enagas to build, own and operate a 12,500 cubic metre LNG bunker tanker.

Worries over X-Press Pearl's bunkers

The main perceived pollution threat following the sinking of the Singapore-flag container ship X-Press Pearl has been plastic pellets which had been part of the cargo and spilled into the sea, threatening fisheries and covering beaches. However, concerns have also been raised over the 300 tonnes of fuel oil that were aboard when it arrived at Colombo's anchorage. Reports have indicated that some of the fuel may have been burnt off during the fire. By mid-June there had been no reports of an oil spill.

VPS on acquisition trail

Major marine fuel testing company VPS has acquired Singapore-based PGI Industries, which provides transformer oil sampling and testing services.

The company said move, in June, was an integral part of its "forward-thinking strategy to better support the power and electricity supply industries in a more sustainable way".

Meanwhile, directly in the shipping sector, VPS has acquired Norwegian-based Yxney Maritime, which describes itself as specialising in "data-driven decarbonisation".

A statement said: "This acquisition is part of VPS's strategy to support the marine industry's efforts to decarbonize and operate more sustainably. It also expands VPS's growing digital services offering. Yxney's advanced analytical software, Maress, provides vessel owners and operators the insight needed to decarbonise maritime operations and help create a more sustainable future. By joining forces, VPS and Yxney can now serve a bigger market and deliver even greater carbon reductions to every customer."

Techfast to buy bunker barge

Malaysia-based components manufacturing group Techfast Holdings is expanding into bunkering activities and has been contracted, under two separate agreements, to supply up to 50,000 tonnes of bunker fuel to Singapore-based Wise Marine.

Techfast also plans to buy acquire a bunker barge for supplying at Port Klang.

Deliveries commenced in April, with a supply of 10,000 tonnes according to Techfast.

"Our volume of marine oil fuels supplied has been limited by the availability of bunkering vessels," Techfast executive director Vincent Tan Wye Chuan said in a statement. "Hence, we have decided to enter into a strategic joint venture, whereby Techfast will fund the purchase of a bunkering vessel to increase our capacity to handle larger supply volumes."

"With the new vessel, we are able to expand the group's supply capacity and deliver marine fuels of up to 50,000 tonnes per month to Wise Marine. This will enable us to secure a larger share of the oil bunkering market in Port Klang, enhancing our revenue streams," said Tan.

BP to supply in Auckland

Oil major BP is to supply VLSFO and MGO at Auckland, New Zealand. It will use the bunker barge Awanuia, owned by Ports of Auckland subsidiary Seafuels, to re-enter the New Zealand market. The New Zealand-flagged vessel can deliver 2,900 tonnes of fuel oil and 600 tonnes gasoil at the same time.

"This agreement will help ensure New Zealand is able to meet its international obligations under Annex VI of the MARPOL convention for the Prevention of Pollution from Ships, by providing international and domestic vessels calling New Zealand with MARPOL compliant fuels," Ports of Auckland announced in a statement.



Bunker sales increase in Singapore ©iStock



Caption New environmental laws on way from European Commission ©iStock

EU URGED TO DITCH LNG

Campaign groups call for focus on e-fuels as European Commission prepares new laws

The EU should promote the use of green synthetic fuels, or e-fuels, by ships and planes as part of its upcoming maritime and aviation fuel laws, environmental groups have told the European Commission in a bid to influence policy in the run-up to key policy decisions. The Commission is due to propose its FuelEU Maritime and ReFuelEU Aviation legislation in July.

The expected FuelEU Maritime and ReFuelEU initiatives will require ships carrying EU trade and aircraft fuelling in Europe to progressively switch to sustainable alternative fuels. In a letter to the Commission, 17 green organisations, including Transport & Environment (T&E) and Green Transition Denmark, say e-fuels offer enormous economic and employment opportunities.

Biofuels and natural gas, on the other hand, do not offer a sustainable alternative for shipping and should be excluded, the groups say. Support should also not be given to crop-based biofuels in planes, which would emit more CO_2 than the fossil fuels they replace while there will not be enough advanced biofuels. Instead, the environmental campaigners argue, lawmakers must send a clear signal to potential investors to focus on e-fuels made with additional renewable electricity.

Delphine Gozillon, shipping policy officer at T&E, said: "E-fuels offer a clean future for the shipping and aviation sectors, but also the fuels industry. The EU must give them the investment certainty they need to flourish by requiring all ships carrying EU trade and aircraft fuelling in Europe to progressively make the switch."

Jeppe Juul, senior policy advisor at Green Transition Denmark, concluded: "We must learn the lessons from Europe's bad experiences of the use of biofuels in transport. All crop-based biofuels must be excluded from the Commission's policy proposals, and sustainable advanced biofuels should be reserved for aviation's needs."



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Flags on the IMO terrace

IMO launches energy efficiency course

IMO's public-private partnership initiative to tackle greenhouse gas (GHG) emissions, the Global Industry Alliance to Support Low Carbon Shipping (Low Carbon GIA), has launched a free to access E-Learning course aimed at seafarers and anyone interested in this aspect of shipping. The self-paced course, An Introduction to Energy Efficient Ship Operation is intended as a first glimpse into how GHG emissions from ships can be addressed.

The online course, designed by e-learning specialist Ocean Technologies Group, features videos, text information, quizzes and more for an interactive experience. Each module includes interactive lessons, resources for additional learning as well as a final summary. The course is specifically designed to be accessible to non-technical audiences.

It was developed and funded by the Low Carbon GIA, a partnership under the framework of the IMO-Norway GreenVoyage2050 Project.

"We know there is a lot of curiosity about how shipping is working to reduce its environmental footprint and we wanted to make this information easily accessible. This course can be taken by seafarers or the general public, and is a free resource that can even be worked on offline," says Minglee Hoe, project technical analyst at IMO's Department of Partnerships and Projects.

Meanwhile, in a separate development, IMO and the German government have signed an agreement to undertake preparatory activities leading to the development of a project proposal to reduce maritime transport emissions in East and Southeast Asian countries.

The project is supported through the International Climate Initiative (IKI) of BMU. IMO will partner with the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) to undertake the preparatory project and to develop the full project proposal.

The agreement is described as the "first step in an ambitious Asia Maritime Transport Emissions project (known as the Blue Solutions Project) that aims to support East and Southeast Asian countries in identifying opportunities to prevent and reduce transport emissions". The full-size project, once approved, will target reduction of GHG and other pollutant emissions from ships within ports, and from hinterland transport through energy efficiency improvements, optimized processes and innovative technologies ('blue solutions').


IMO HQ

Trafigura's sustainable financing

Independent global commodity trading company Trafigura Group has completed what it describes as the largest sustainability-linked financing on record in the US Private Placement market to date. The deal incorporated KPIs designed to incentivise the company to meet ambitious targets related to the reduction of greenhouse gas emissions, the further alignment of Trafigura's responsible sourcing programme with international standards for sustainable procurement, and the development of a renewable power portfolio.

The transaction raised US$203.5 million of financing over five, seven and 10- year spans. The transaction was Trafigura's sixth in the market, and was timed to refinance a US$98 million US private placement maturity and also raised over US$100 million of additional liquidity for the company. The transaction was increased in size from an initial US$100 million following strong investor demand, with over half of the total amount raised in the 10-year tranche.

Wärtsilä joins Finnish clean propulsion consortium

Technology group Wärtsilä is participating in a consortium of Finnish research organisations and leading companies researching means for developing radical new solutions for clean and efficient marine and off-road transport. The project is expected to run until spring 2023, and has been granted funding of EUR7.9 million by Business Finland, the Finnish Government's organisation for innovation funding and trade, travel and investment promotion.

Led by the University of Vaasa, the Clean Propulsion Technologies project addresses tightening emissions legislation and ways by which new technologies can be employed to create sustainable propulsion solutions. Wärtsilä's depth of experience and technical know-how in propulsion systems will play a central role, in particular in establishing a technology roadmap for directing future R&D efforts. According to Wärtsilä, the most significant technological aspects of the anticipated project outcome are a ground-breaking medium-speed engine working in fuel-flexible Reactivity Controlled Compression Ignition (RCCI) mode, the further development of dual-fuel engine technology to enable a drastic reduction in methane emissions at low and partial load, selective catalytic reduction (SCR) control technology improvements, and the development of machine learning control technology for greater accuracy in engine automation and control. The research will further focus on developments in advanced after-treatment measures aimed at lowering greenhouse gas emissions by at least 20%. Designing and implementing an optimal predictive powertrain control architecture for hybrid propulsion is also on the agenda.


Wartsila's Fuel Laboratory ©Wartsila

The other project partners are Aalto University, Åbo Akademi University, Tampere University, VTT Research Centre of Finland, Lappeenranta-Lahti University of Technology, AGCO Power, Meyer Turku, Napa, Dinex Finland, Geyser Batteries, Proventia, Bosch Rexroth, and APUGenius.

Mechanical engineers tell shipping to slow down and use sails

On World Earth Day, 22 April, a new report from the UK's Institution of Mechanical Engineers (IMechE) called on the British government to support the development of a demonstration ship with retro-fitted sails.

Fitting sails to cargo ships and sailing more slowly could reduce greenhouse gas emissions from the shipping industry by up to 40% or possibly more as technologies improve, according to ImechE.

In its report, Accelerating Decarbonisation in Shipping: A No Regrets Approach Using Wind Power, IMechE calls for the government to support the development of a demonstration ship using retro-fitted sails to help ship owners and users understand the business case for how wind could be used as primary propulsion for cargo vessels

"We need to use existing and emerging technologies to urgently reduce the impact of our global supply chain on the environment. Continuing with the "business as usual" approach could result in shipping being responsible for up to a fifth of global emissions by 2050," said Dr Jenifer Baxter, ImechE's chief engineer. The Institution recently supported a feasibility study by Smart Green Shipping which showed the potential for reducing emissions on a ship retrofitted with fixed sails could be as much as 30% given the right conditions.

Samskip commits to "sustainable marine biofuels"

Major multimodal logistics company Samskip says it has increased its commitment to greener shipping through a new formal agreement with sustainable cargo initiative GoodShipping to run part of its fleet on marine biofuels and significantly reduce its carbon footprint.

The initial usage of biofuels is said to enable a CO_2-reduction of up to 45%, with plans to scale up to a CO_2-reduction of up to 80% for any given voyage later in 2021. Samskip says: "This initiative underlines the company's longstanding dedication to take a leading role in reducing CO_2 emission within the sea freight industry."

The 800 TEU Samskip Endeavour has recently switched to using biofuels. Two years ago, she was the first vessel to be biofuel-bunkered through the GoodShipping initiative in demonstration aimed at confirming the viability of biofuels as a marine alternative to fossil fuels. Samskip says the fossil-free bio-residual fuel equivalent product is made from sustainable waste streams and has proved to be a successful substitute for conventional marine fuels as part of the vessel's operations between the Netherlands and Ireland.

Under the renewed agreement, also in partnership with GoodShipping, biofuels supplier GoodFuels is supporting Samskip's plan to rapidly extend the use of biofuels on more of its vessels this year. GoodFuels' second-generation sustainable biofuels consist of certified feedstock, labelled as waste or residue. There are no land-use issues, no competition with food production or deforestation during the production process.

"Sustainability runs through Samskip as a core value from every perspective. Therefore, we take great pride in and welcome the collaboration with GoodShipping to strengthen our deep partnership, becoming one of their fulfilment and innovation partners," says Ásbjörn Gíslason, CCO and Deputy CEO at Samskip. "We always aim to build a better future and to leave a positive footprint on our planet. By playing a forward-thinking and pioneering role in the energy transition, our customers can now benefit from a simple and easy means of decarbonising their cargo streams. We get to pioneer advanced marine biofuels, and the environment benefits from an immediate carbon reduction."

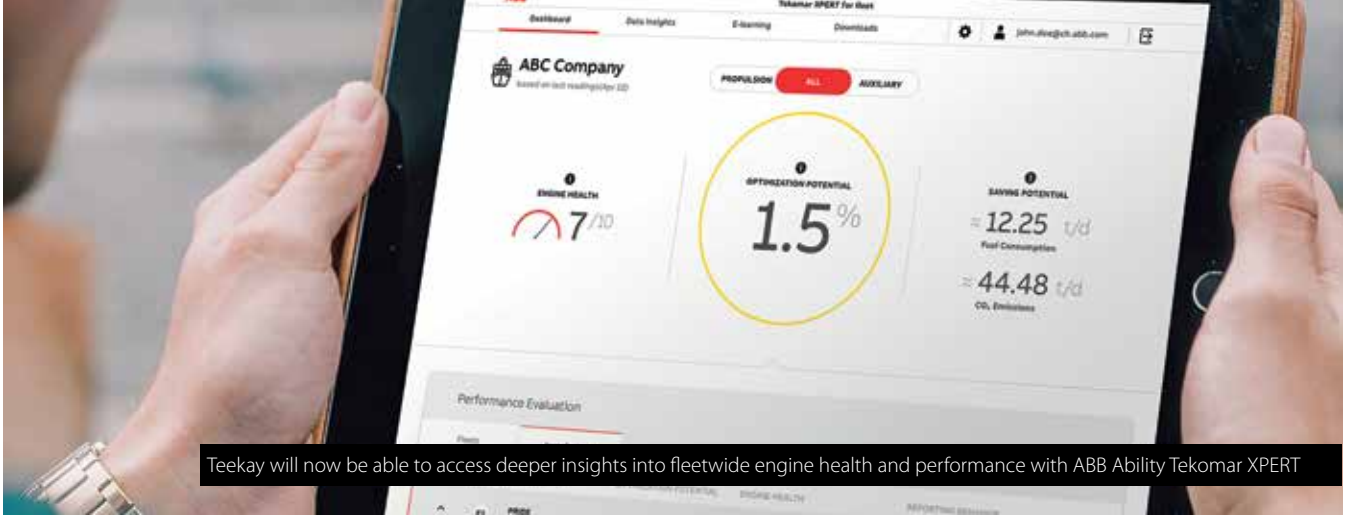
"This announcement marks yet another important milestone in our journey beyond the fossil default," says Katarin van Orshaegen, Commercial Lead at GoodShipping. "Reducing fuel emissions and consumption is a vital next step for the maritime transport industry, so we are extremely pleased to have found a stable fulfilment outlet for our sustainable cargo streams with Samskip, deepening a long-term partnership that is helping to change the way our market thinks about future fuels."

Carbon-neutral methanol fuel cell system

An innovative fuel cell system based on high-temperature proton exchange membrane (HTPEM) technology from Blue World Technologies is being constructed for testing at the Alfa Laval Test & Training Centre in Aalborg, Denmark. The test installation, which will use methanol as fuel, will explore the technology's potential as a source of marine auxiliary power. Funded by Danish EUDP (Energy Technology Development and Demonstration Program), the project is a joint effort between fuel cell maker Blue World Technologies, Alfa Laval and vessel owners DFDS, Maersk Drilling and Hafnia.

The aim of the project is to establish a highly efficient and cost-effective HTPEM fuel cell solution, giving marine vessels a realistic alternative to combustion-based auxiliary power within the near future. The fuel cell test setup will have a power of 200 KW, but the fully developed and modular design should be possible to scale up incrementally to a level of 5 MW.

The fuel cell system, which will provide clean operation with no particulate emissions, will use carbon-neutral renewable methanol as fuel. Methanol is already being used in testing at the Alfa Laval Test & Training Centre. The fuel cell system concept, however, could be possible to adapt for fuels such as LNG and ammonia.



Teekay will now be able to access deeper insights into fleetwide engine health and performance with ABB Ability Tekomar XPERT

FOCUSING ON CARBON EMISSIONS

Two new products offer shipowners help to monitor CO_2 emissions

Shipbroker IFCHOR and carbon market specialist ClearBlue Markets have partnered to offer carbon emissions advisory services to the shipping industry. In another development, Teekay is to use ABB Ability Tekomar XPERT including new CO_2 emissions indicator software on its fleet of 54 suezmax and aframax tankers.

IFCHOR and ClearBlue Markets say that the new service, IFCHOR ClearBlue Oceans, will help clients navigate changing legislation, source high quality emissions offsets as well as structure and execute carbon offset projects or transactions.

The new service is said to be a response to the growing number of requests for shipowners and operators to offset their direct greenhouse gas (GHG) emissions through voluntary carbon standards. The movement of global trade by sea accounts for around 3% of global anthropogenic GHG emissions.

Trifon Tsentides, Director of Business Development at IFCHOR said: "The combined strengths of a shipbroker and renowned carbon market specialist will help shipowners and charterers alike navigate their way through the complexities of carbon offsetting. From creating plans and strategies, to executing and registering trades, we are providing clients with a complete set of actionable tools to reduce their operational carbon footprint. With emissions from shipping looking likely to fall under mandatory carbon pricing regimes in the future, voluntary pledges allow emitters to build their experience of the carbon markets and make a positive difference from today."

ClearBlue Markets director Nicolas Girod, Director of Markets added: "Carbon offset markets have matured significantly since their inception over two decades ago. Today carbon emitters can purchase credits which enable investments in projects which make an impact, confident in the knowledge that these initiatives are independently verified, traceable and that they will meet their stakeholders' expectations. Today, the cost of offsetting emissions is far below the cost of abating emissions in the shipping sector. As such, it offers participants the chance to plan in more longer-term direct emissions reductions while charting a climate conscious course today."

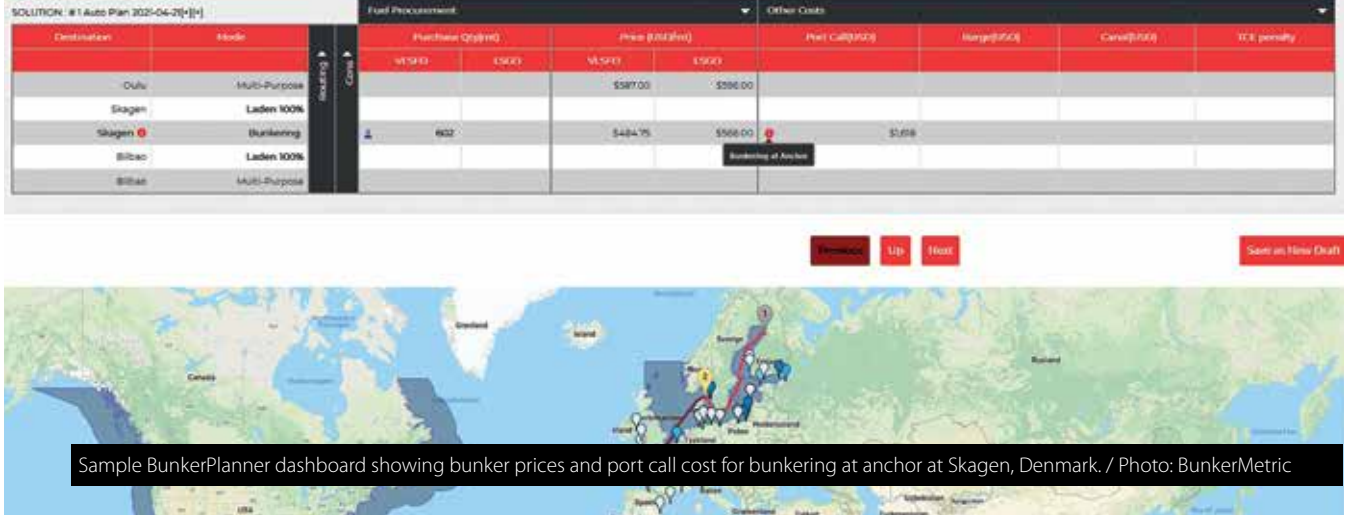
Meanwhile Teekay is deploying ABB Turbocharging's engine diagnostics software to deliver deeper insights at fleet level.

Teekay will roll out Tekomar XPERT for its fleet, including the software's new CO_2 emissions indicator. The company has used Tekomar XPERT to monitor its vessels engines since 2015, but should now be able to access deeper insights into fleet-wide engine health and performance as well as at-a-glance CO_2 emissions data.

While Tekomar XPERT monitors the engines on an individual vessel to deliver diagnostics and advisory, Tekomar XPERT for fleet includes a management tool which enables benchmarking across the fleet, highlighting further opportunities for optimizing engine operations. The company will be able to access data, including fleet wide engine health and annual CO_2 emission savings potential, through the Tekomar Fleet Portal. Information will also be integrated into Teekay's Vessel Balanced Scorecard, a proprietary tool that collects data generated by operations systems into a daily digital dashboard for each vessel.

Monitoring bunker call costs

Bunker software supplier BunkerMetric is integrating its BunkerPlanner application with Inchcape's World of Ports (WoP) service to "source accurate and constantly updated data on bunkering-related port call costs".



Sample BunkerPlanner dashboard showing bunker prices and port call cost for bunkering at anchor at Skagen, Denmark. / Photo: BunkerMetric

The company says that choosing the right bunkering port has a huge impact on the Time Charter Equivalent (TCE) of a voyage. It adds: "Operators making the right call can easily improve the TCE by hundreds of dollars per day, or tens of thousands of dollars per voyage. BunkerPlanner generates a bespoke bunkering plan for each vessel and voyage based on the latest available schedule and prices, typically pulled through integration with the client's Voyage Management System (VMS) and now supplemented with data from Inchcape."

The move will mean the software also takes up-to-date port call, anchorage, barging and other costs into consideration, enabling operators to choose the right bunkering ports from multiple bunkering scenarios without worrying about unexpected outlays.

"Choosing a bunkering port is sometimes simplified into a choice of the lowest dollar per tonne. But to truly improve voyage TCE you need to look more holistically at the implied costs of bunkering. Is it induced, how long is the deviation, and how much is the port call cost? Vlissingen may be 15 dollars per tonne lower than Skaw, but the anchorage cost can easily be 10,000 dollars higher at Vlissingen, cancelling that benefit. By including World of Ports port call data, we are significantly adding to the value of BunkerPlanner for our clients," said BunkerMetric CEO and co-founder Christian Plum.

Jeff Clark, Head of WoP at Inchcape, says: "By leveraging Inchcape's global network combined with the Port Cost Estimator module in WoP, we can provide a data feed to BunkerPlanner allowing their users to access voyage-critical port cost data through one dashboard, instantly."

Fuel quality alert service

The Swedish Club's Trade Enabling Loss Prevention tool (TELP) now provides the P&I club's members with targeted Bunker Alerts, warning vessels headed for port of any fuel quality issues that have been reported in the area.

The Swedish Club has partnered with bunker fuel testing company VPS, to provide this new service, which is free of charge to members of The Swedish Club.

Peter Stålberg, Senior Technical Advisor, explains: "It's really all about following best practice, and optimum loss prevention processes. A vessel heading for a port known to have fuel quality concerns needs to be extra vigilant. Receiving advance warning of potential issues with fuel quality really puts the spotlight on the importance of good sampling routines.

"TELP is an intelligent system," says Stålberg. "We deliver information only when relevant and timely to the vessel's current voyage pattern. This avoids the danger of information overkill, and coupled with the other personalised services we are able to deliver to members during a voyage – information on dangerous hotspots, correspondents' updates on local issues, and advice on COVID-19 restrictions – we are really seeing TELP coming into its own as a major force in the drive to improve loss prevention."

ONE expands use StormGeo

Container ship operator Ocean Network Express (ONE) is increasing its use of StormGeo's weather intelligence, ship routing and fleet performance management services. ONE vessels now have StormGeo s-Planner BVS installed, which utilises frequent, accurate forecast information to ensure avoidance of potentially damaging sea conditions.

ONE's onshore staff also have access to StormGeo's s-Insight web platform, giving instant visibility of the location and performance of their entire fleet.

Sachin Sirsikar, General Manager Global Vessel Operations of ONE said, "StormGeo's products and services are an essential part of our onboard and onshore operations. Having access to weather forecasts specific to our voyages helps us manage our strict ETAs with a focus on safety and fuel efficiency. In a time of digitalization and sustainability within shipping, we are proud to partner with a company who prioritizes these values as much as we do."



Bunker barge alongside a containership at the Port of Rotterdam. Including port call cost data from Inchcape will support BunkerPlanner users in decision making on where to bunker their vessels taking both bunker prices and port costs into account. / Photo: Inchcape

Bunkering in the Ports of the Sultanate of Oman

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REGIONAL ASPIRATIONS

Mauritius could be a major Indian Ocean bunkering hub but this would take significant investment

Port Louis is Mauritius's sole port for international trade and is regulated and controlled by the Mauritius Ports Authority (MPA), which is also responsible for the management port infrastructure, related facilities, and equipment. The Cargo Handling Corporation (CHC) Ltd is responsible for the management of all port handling operations pertaining to containers and general cargo.

Some liberalisation of the sector has been underway since 2014. According to local shipping agent Port Agency Services (PAS) most bunkers supplied at Port Louis are imported and supplied by the private companies that each operate a barge.

Bunkering can take place either at berth or at anchorage. Pipelines for delivery of bunkers from the quay are, according to PAS, "readily available and in very well maintained condition". For anchorage services, Port Louis has a number of barges operated by a diverse set of suppliers dedicated to this activity.

Indian Oil (Mauritius) Lt, Vivo Energy Mauritius, Total Mauritius, Engen (Mauritius), Celero and Taylor Smith Bunkering are currently active suppliers at Port Louis, while Total only supplies by pipeline.

PAS notes on its website: "Since the partial liberalisation of the sector in 2014, the bunkering field has seen an increase in competition and efficiency. After the 2020 IMO low sulphur regulations, the main types of products being offered on the territory are MGO and VLSFO. Some suppliers do keep a small avail of HSFO for vessel with scrubbers."

In fact, no HSFO was supplied in the first four months of 2021, all stems being of VLSFO or MGO. During this period, a total of 158,864 tonnes of VLSFO and 37,425 tonnes of MGO were supplied at Port Louis, according to figures seen by *World Bunkering.*

PAS says: "With the increasing liberalisation of the market and the incentives offered by the MPA, we are positively hopeful that Port Louis will increase its bunker client base."

In a similar vein, the managing director of Southbond Shipping Agency, Gulshan Jugroo tells World Bunkering: "Mauritius is in fact gearing up for more bunker storage in Port Louis. The trend is towards more and more vessels stopping at Port Louis for bunkering, be it just for top-ups or full refuelling."

He adds that "a few international bunkering companies are looking to set up shop in Port Louis".

There are problems though. Jugroo says: "Today one of the issues being encountered is the lack of facilities for new suppliers to enter. Storage, pipelines and enough barges are all missing."

He also points out there is very little land close to quays for building storage facilities. "Further most," he explains, "quays are also jammed with current physical suppliers' pipelines. The costs to implement new infrastructures added to local charges mean that bunker prices will always have an added premium to customers in the short to medium term until Port Louis accommodates more storage facilities and pipelines."

"There is no doubt," Jugroo stresses, "that interest from foreign investors in this sector is substantial. The government, for sure, is encouraging these developments.

Plans for a bunkering hub have been on the table for quite some time now. Actions are slow though.

Nevertheless, Jugroo is optimistic, asserting: "I believe that once more storage facilities come online in Mauritius, larger volumes will be imported by local players which will encourage more competition and this is in-turn will encourage more bunker stops for vessel owners/operators. I also think that there will be more barges operating in Port Louis in the medium to long term."

The government promotes the development of Port Louis as a regional container transshipment hub which should benefit the bunker sector. The port's one container terminal was extended in 2017, doubling capacity to about 1 million TEU. It can accept 12,000 TEU ships with a draft of up to 15 metres. Further capacity expansion has been proposed, by building a 1.5 million capacity island container terminal with a capacity of 1.5 million TEU. The project would require the building of an artificial island close to the current container terminal. A new breakwater would also be needed. A public-private partnership has been proposed to undertake both projects which together would cost in excess of US$800 million.

There also plans to develop Mauritius into a major bunkering hub through the construction of oil terminal in the North West of the island. This major project would involve building 600 metres with capable of taking ships with drafts of up to 20 metres.



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Five Iskenderun bulk carriers will be the first hulls applied with Nippon Paint Marine's new FASTAR antifouling. ©Nippon Paint

NEW SELF-POLISHING ANTIFOULING

Hydro-gel technology promises significant fuel savings

Turkey-based Iskenderun Ship Management has specified Nippon Paint Marine's new self-polishing antifouling paint FASTAR for five bulk carriers scheduled to drydock in China this year.

The coating is designed to deliver an approximate 8% reduction in fuel consumption, and thus CO_2 emissions, due to its reduced film thickness and lower polishing rates. FASTAR, developed to reduce the volume of paint required without detriment to performance, was officially introduced to the market in January this year.

The panamax ships Ata-M and Toros-M were scheduled to drydock at COSCO's Guangzhou shipyard in May and June respectively, with the 31,700 dwt Selin-M, 32,949 dwt Nihat-M, and the 50,212 dwt Bozburun-M set to follow in the second half of the year.

FASTAR XI, which incorporates Nippon's hydro-gel technology, will be applied to all five vessels.

Hull performance programme

Coatings manufacturer Jotun has launched its HullKeeper proactive hull optimisation programme, aimed at enabling ship operators to improve hull efficiency, reduce costs and improve environmental performance.

The company says HullKeeper combines its "extensive digital capabilities, ROV inspections and trusted analytical and technical expertise to help operators keep fuel, inspection and cleaning costs under control".

Designed by Jotun's hull performance expert team, HullKeeper is described as "a unique programme enabling optimised hull performance regardless of the applied coating". Jotun says: "Ship operators can take full control of their operations with hull monitoring, fouling risk alerts, inspections and advisory services helping them to identify potential fouling problems long before they start to slow their vessels down. They can use everything the program offers, or just select the parts that work for them. Services will be refined and added to ensure the HullKeeper programme meets customer needs and requirements at all times."

Designed by Jotun's team of hull performance experts, the four-part programme optimises hull performance, regardless of the chosen coating. Ship operators can take full control of their operations through hull monitoring, fouling risk alerts, inspections and advisory services. Operators can benefit from the complete package or select only the parts that work for them.

According to Stein Kjølberg, Jotun's Global Category Director Hull Performance, more ship operators have recognised that "proactive fouling control and hull efficiency are critical to managing increasingly strict regulations, rising fuel costs and environmental performance".

Repelling barnacles

More attention is needed to prevent barnacle fouling in ship niche areas according to research commissioned by Swedish biotechnology company, I-Tech AB.

The company says that the study, undertaken by UK-based independent marine coating consultants Safinah Group confirmed that "barnacle fouling is hugely prevalent in ship niche areas and that the industry needs to take steps to mitigate the impact of hard fouling in these areas".

In 2020, I-Tech AB commissioned UK based marine coatings consultants to analyse the hull condition of a 249-ship sample in dry dock spanning four years between 2015 to 2019. As well as finding unacceptable levels of hard fouling coverage (>10%) on the hulls of more than 44% of the vessels inspected, the inspections data also revealed animal fouling in 95% of niche area observations.



Monjasa seems confident of recovery in the WAF market ©Monjasa

OPPORTUNITIES FOR GROWTH

Despite a slide in volumes due to the pandemic, suppliers serving most African markets are showing signs of optimism, John Rickards reports

Despite the challenges and reduced volumes faced by most suppliers worldwide across the past year, Monjasa, for so long the dominant force in the West African market, saw annual group volumes up 9% to 4.9 million tonnes. The West African operations of the group contributed 1,050,000 tonnes to that total, second only to the Americas despite being down markedly from the 1.4 million tonnes it supplied in the region in 2019. HSFO demand, as expected, fell sharply, with VLSFO making up 59% of volumes and MGO 22%. In December 2020, the company replaced its floating storage tanker serving its fleet in the region with the 119,456 dwt SKS Dokka positioned off Lomé, Togo.

All told, the company seems pleased to have weathered the year well. In its annual report, group CEO Anders Østergaard said: "During a year of unseen events, Monjasa's highest priority was to ensure health and safety for our employees and uninterrupted supply of marine fuels to the shipping industry. We succeeded in providing a safe working environment and despite the disrupted maritime trade flows, we recorded an increasing demand for our services and products.

"Monjasa's response to these challenges reflects our organisational and maritime capabilities in matching supply and demand no matter the circumstances. Together with our strong financial results, Monjasa is in a very solid position to face future industry challenges and financial requirements."

Looking ahead to the rest of 2021 and a - hopefully - less turbulent year with IMO 2020 now well-established and Covid's economic and human effects at least a known quantity, a Monjasa spokesperson told ***World Bunkering***:

"Regarding West Africa, the market has surely been affected by the disrupted trade flows and lower activity levels, however, we are confident that the market will regain strength as global trade slowly returns to pre-pandemic levels. Monjasa is maintaining a strong fleet of approximately 10 fixed tankers throughout the region from the Gulf of Guinea to Namibia."

Positive signs, then, and we all have to take as many of those as we can get.

Similarly, the move in March by Oryx Energies subsidiary Addax Energy to launch bunker operations in Mauritania can only be a positive one that hopefully speaks well of the company's expectations for WAF trades to recover from Covid's impact reasonably soon. Addax has deployed two tankers offering VLSFO and MGO to the Nouadhibou anchorage and is evaluating extending its offering to Nouakchott.

"This is a great opportunity to provide an efficient solution for the growing energy demands of the West African region and to contribute to its economic growth," the company said in a statement. Addax has a long-standing relationship with Mauritania, having been awarded petroleum products supply tenders to the country under World Bank funding three times in a row, most recently covering the height of the pandemic last year.

There have been additional challenges in the region this year. The Gulf of Guinea has seen a surge in piracy going into 2021 which has seen Italy and the UK involved in aiding coastal states like Ghana in improving security for ships transiting the area or anchoring offshore.

Ensuring ready availability of VLSFO has likewise been, if not an issue, then certainly something that many people involved in the sector have wanted to keep an eye on.

In April, the Nigerian Maritime Administration and Safety Agency (NIMASA) held a two-day event with refiners and bunker suppliers aimed at ensuring the continued availability of VLSFO in the country. NIMASA director-general Dr Bashir Jamoh said: "As the country's shipping regulator, we have had interfaces with the relevant stakeholders on how to reach a win-win agreement on



Ghana and other countries on the Gulf of Guinea are taking steps to dissuade piracy ©Ben Sutherland/CC-BY

Nigeria's compliance with the IMO sulphur content cap. We are happy to announce that the coast is clear for us to achieve this mandate.

"Nigeria has an advantage ab initio, because we produce low sulphur crude. The challenge for us now is conversion of this advantage to availability of bunker fuels that meet the IMO mandate.

"I make bold to say that we have all it takes to be the bunker fuel hub for Sub-Saharan Africa. There is a US$2 billion bunker fuel market in Sub-Saharan Africa waiting to be harnessed by our businessmen and women.

"Our refineries are not working at full-capacity, and this is an opportunity for the modular and other private refineries to come in to fill a vital gap in the marine fuel supply chain. Bunker fuel is a critical element in the shipping business.

"With the coming into effect of IMO 2020, we assure you as an Agency that the country's shipping community will be galvanised to ensure availability, supply, and, in fact, self-sufficiency in 0.5% sulphur content fuels in line with the IMO standard."

Self-sufficiency and broadening the country's refining base to supply VLSFO is certainly no bad idea on the face of it. South Africa's Engen refinery in Durban has seen running shutdowns - alongside other South African refineries - and as a result the company, come April, was having to import VLSFO to meet demand. The Durban refinery, like Astron Energy's Milnerton plant in Cape Town, suffered fires in 2020 and press speculation had suggested both would be out of action until 2022.

In late April, though, Engen announced that it was ending refining altogether and converting the Durban refinery - which had accounted for 17% of production in South Africa - to a fuel import terminal.

"This considered decision was not taken lightly and follows an extensive strategic evaluation of Engen's refining business, in which every facet of the refinery was scrutinised and assessed against market demand, future growth potential and the ability to contribute sustainably," the company said in a statement. "The substantive cost of investment for upgrades required to bring the refinery in line with evolving quality and emissions regulation were also part of the strategic review considerations."

Engen MD and CEO Yusa' Hassan said: "The conclusion of the strategic assessment is that the Engen refinery is unsustainable in the longer-term. This is primarily due to the challenging refining environment as a result of a global product supply surplus and depressed demand, resulting in low refining margins, and placing the Engen refinery in financial distress. Furthermore, unaffordable capital costs to meet future CF2 regulations compliance continues to be a challenge for the long-term sustainability of the refinery.

"The investment in new infrastructure to create a world-class import terminal as well as repurposing of the refinery site will generate much needed economic activity in KwaZulu-Natal. In the current economic climate, this should contribute not just in terms of capital, but also in terms of job creation and skills transfer, something that will support South Africa's post Covid-19 economic recovery. The RTT will also strengthen South Africa's long-term security of fuel supply."

The terminal conversion is slated to be complete in Q3, 2023. Astron Energy has yet to reveal a confirmed date for the restart of its Milnerton refinery, which accounts - or accounted, considering Engen's decision - for around a quarter of South Africa's capacity. Coming on the back of the pandemic's impacts on the local bunker market, a significant loss of local refining capacity is hardly good news.

There are bright spots, though. This year, Amsol added a bunker tanker supplying Durban after signing a multi-year fuel distribution contract with Shell. The company already operated a fleet of 18 service vessels of various types, but said its "growth strategy has had as one of its focus areas the expansion of its marine services portfolio into the operation and management of seagoing product tankers; building on its reputation as the premier bunker barge operator in the region."

CEO Paul Maclons said: "With a changing requirement for the transportation and delivery of multiple grades of marine fuel, Shell has partnered with AMSOL to provide a world class service in the Port of Durban. This partnership has resulted in AMSOL acquiring a product tanker, representing a multimillion-rand investment, and will provide sustainable employment for South Africans in the specialised niche of tanker operations."

And in the port of Coega, Algoa Bay, Transnet National Port Authority has given DNG Energy a license to establish an LNG bunkering facility. The company, already involved in promoting the use of LNG in South Africa for shoreside applications, expects the project - including an FSU, an 8,000 dwt LNG barge being built by South African Shipyards and all the associated support infrastructure - to cost around US$150 million and it hopes to begin operation in September. DNG says its fuel will be competitively priced despite South Africa's lack of local gas production as infrastructure and operating costs will be spread across both marine and shore power applications.

While there have been other potential LNG bunkering facilities proposed as part of gas projects further north, Algoa Bay's position on the main trades could make it an attractive option for vessels bound for the Cape.

Tanzania was one of those potential locations, with a mammoth US$30 billion gas export facility originally planned for Lindi to handle LNG produced by Exxon, Equinor and Shell from the country's offshore fields. The project, which in one form or another has been mooted since 2014, was suspended in 2019 by the Tanzanian government over concerns about the terms of the production sharing agreement signed by the previous president, and in January this year Equinor said it was writing down the book value of its share in the Tanzania LNG project by almost US$1 billion, citing "overall project economics [that] have not yet improved sufficiently to justify keeping it on the balance sheet".

However, in a May budget presentation, Tanzania's energy minister Medard Kalemani announced that construction work was expected to begin in 2022. The terminal isn't expected to be completed until 2028, so it will be a while before exports - and any associated bunkering - begin, but with a production capacity given by Kalemani of up to 10 million tonnes per annum, the Lindi facility has vast potential. Talks over a new host government agreement with the companies involved had begun in April, he said. "We instructed the government negotiation team to hold separate talks with each individual investor, instead of the previous arrangement of holding joint talks with all the investors," he said. "We expect these talks to be completed within seven months."

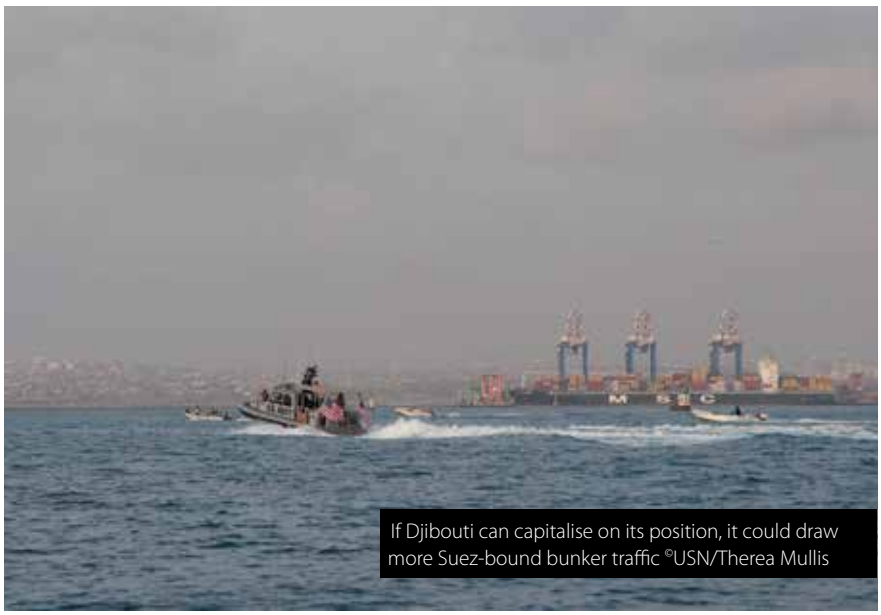
If successful, the start of the project would be a significant boost for the region. The East African coastal states have had a tougher time in fuel economics terms than those on the West, with national lockdowns and plunging demand seriously affecting fuel volumes.

North of the Horn, though, the Ever Given's blockage of the Suez Canal in March temporarily threw a spotlight on Djibouti as a potential bunker hub.

Red Sea Bunkering, the country's sole bunker supplier since 2015, had only the month before acquired an 80,000 dwt products tanker to act as floating storage - not quite operational in time for the Canal's blockage. As ships built up, or diverted, the company reportedly saw weekly fuel sales 25% higher than usual.

Last year, the company signed a deal with China's Chimbusco to provide floating fuel production as well, suggesting that Red Sea Bunkering sees ongoing potential longer-term growth than that offered by a single Canal blockage. Djibouti could offer serious competition to other ports serving ships en route to and from Suez as well as benefiting from its current role as the main port of entry for goods bound in and out of Ethiopia. And maybe that's no bad thing; the latter is increasingly in question, despite Djibouti's infrastructural advantage, as Ethiopia has looked to diversify its sea access through deals with Eritrea and Somaliland in recent years.

In May, Djibouti was ranked the top port in Africa and the 61st globally in the latest global Container Port Performance Index, published by the World Bank and IHS Markit, on the basis of its efficiency, scale and service offerings across different ship sizes and levels of containers moved. The port's container terminal has a throughput capacity of 1.6 million TEU. If it could use its increasing bunker profile to become a significant fuelling point for ships transiting Suez, in addition to the simple financial gains this would bring, it would also allow the port to be less exposed to the economic inclinations of its landlocked neighbour.



If Djibouti can capitalise on its position, it could draw more Suez-bound bunker traffic ©USN/Therea Mullis

GETTING TO WORK ON FUTURE FUELS

IBIA has launched a major new Working Group to help map out our industry's way toward GHG reductions

It is my pleasure to advise that IBIA's Board of Directors decided to launch a new Working Group on Future Fuels and that I have been appointed as its Chairman.

Shipping needs to meet the ambitions of the IMO's greenhouse gas strategy and now is the time for the only truly international bunker association to actively participate in the formulation of an informed opinion on what is already here by way of fuels and other alternatives, what is contemplated, what is at stake and which are the numerous paths going forward.

Achieving this will require the active and indispensable participation of IBIA's valuable members. There can be no doubt that this topic is multifaceted and immensely important for the future of the bunker industry itself and all its stakeholders.

The Future Fuels Working Group consists of a wide range of shipping industry executives, drawn from IBIA's high-quality membership basis: bunker suppliers, bunker procurement representatives, technical experts and independent advisors, oil majors, classification society and fuel laboratory representatives, and alternative/future fuels suppliers. We have aimed for and accomplished an encompassing representation to map out in a holistic, practical and reliable way for current and projected projects. We will focus on how the bunker industry can be proactively involved in identifying and evaluating solutions and we shall strive to become the epicenter of how IBIA's position and active input to the IMO and other international organisations is formulated. We are already working on an all-inclusive map of fuels/options available and/or contemplated for, touching upon crucial issues such as:

- Regulatory framework
- Technical feasibility
- Availability
- Current and projected production levels and locations
- Green production levels
- Port infrastructure
- Emission levels and fuels' life-cycle emissions
- Energy content
- Current feedstock availability
- Operational, technical and safety parameters
- Pricing

The aim is to incentivise dialogue, participate in the paramount discussions already under way both at the IMO and elsewhere, clarify to IBIA members -and beyond- the current legislative framework, the milestones ahead and the transitional hurdles that need to be first identified and then, ultimately, overcome. IBIA's aim is to provide to the bunker industry the fullest possible picture of how the future of fuels is being shaped.

All this through clearly aligned projects and reports, teamwork, respect and appreciation for the opinions expressed.

We shall be regularly publicising the Working Group's findings on IBIA's website, IBIA's official magazine ***World Bunkering***, through IBIA's regular Members' Meetings and of course at IBIA's Conferences and Annual Convention, and the plethora of fora where IBIA participates.

We at IBIA's Board of Directors are proud to be working hand-in-hand with our members in the promotion of this core issue which shall profoundly affect the international bunker industry and I am personally honored to be steering the group's discussions and deliberations.



Constantinos Capetanakis Bunker Director - Starbulk SA. Member of IBIA's Board of Directors. Chairman of IBIA's Working Group on Future Fuels



Alfa Laval Test and Training Centre

NEW TECHNOLOGY FUEL CELL

A carbon-neutral methanol fuel cell system is being developed in Denmark

An innovative fuel cell system based on high-temperature proton exchange membrane (HTPEM) technology from Blue World Technologies is being constructed for testing at the Alfa Laval Test & Training Centre in Aalborg, Denmark.

The test installation, which will use methanol as fuel, will explore the technology's potential as a source of marine auxiliary power. Funded by Danish EUDP (Energy Technology Development and Demonstration Program), the project is a joint effort between fuel cell maker Blue World Technologies, Alfa Laval and vessel owners DFDS, Maersk Drilling and Hafnia.

The aim of the project is to establish a highly efficient and cost-effective HTPEM fuel cell solution, giving marine vessels a realistic alternative to combustion-based auxiliary power within the near future. The fuel cell test setup will have a power of 200 kW, but the fully developed and modular design should be possible to scale up incrementally to a level of 5 MW.

A year of planned testing at the Alfa Laval Test & Training Centre will focus on the fuel cell system's durability and lifetime. HTPEM fuel cells have a higher tolerance for thermal cycling than other fuel cell types, which makes them well suited to the variable power production needed from a genset.

However, Alfa Laval cautions that the technology will need a lifespan comparable to that of combustion technologies in order to be feasible on board, which will mean addressing various sources of performance degradation.

The fuel cell system, which will provide clean operation with no particulate emissions, will use carbon-neutral renewable methanol as fuel. Methanol may be one of the most promising fossil-free fuels available for future shipping and is already being used in testing at the Alfa Laval Test & Training Centre. The fuel cell system concept, however, could be possible to adapt for fuels such as LNG and ammonia.

The EUDP-funded project brings together a number of committed and well-established players. Alfa Laval will manage and coordinate the project in addition to supplying the innovation resources of the Alfa Laval Test & Training Centre.

"Alfa Laval is proud to work with such experienced partners to realise a high-efficiency HTPEM fuel cell system for marine use. Alongside our efforts with solid oxide fuel cells in SOFC4Maritime and the work with methanol combustion already underway at the Alfa Laval Test & Training Centre, this project is a key step in moving the industry into a carbon-neutral fuel landscape," says Lars Skytte Jørgensen, Head of Technology Development, Energy Solutions, Alfa Laval Marine Division.

Methanol fuel cell technology developer and manufacturer Blue World Technologies will supply the fuel cells. Headquartered in Aalborg, Denmark, Blue World Technologies says it is," ramping up for the mass production needed to bring fuel cells into cost parity with combustion-based solutions."

"Building on the scalability of automotive applications, we are convinced that methanol fuel cell systems can drastically reduce maritime climate and environmental impact. By further developing our technology in partnership with marine colleagues, and by ramping up our production capacity at the same time, we can deliver a fuel cell solution that is green, operationally sound and also commercially viable," notes Mads Friis Jensen, Chief Commercial Officer and Co-founder, Blue World Technologies.

Three vessel owners will contribute insights regarding the operational and commercial implementation of the HTPEM fuel cell system. DFDS, owner of one of Europe's largest shipping networks, is actively moving away from fossil fuels and brings experience from other fuel cell projects.

Maersk Drilling, a Danish owner and operator of drilling rigs, has a strong focus on energy efficiency and brings experience of using auxiliary power for special applications. Hafnia, owner of one of the world's largest product tanker fleets, has a strategy of transitioning to viable future marine fuels and believes strongly in methanol. Hafnia has considerable experience of methanol bunkering and operations.

"Fuel cells have the potential to expedite the green transformation of shipping. The technology will enable a new generation of very simple and reliable ships that will be much easier to digitize than the ships we have today. This will open up for exciting new opportunities," Jakob Steffensen, Innovation Lead, DFDS.



Mads Friis Jensen,and Lars Bo Andersen, with HTPEM fuel cell at Alfa Laval Test & Training

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INDUSTRY COALITION HITS BACK AT LNG CRITICS

SEA-LNG ramps up arguments for adopting LNG as a marine fuel despite increasing criticism from environmental groups and the recommendations of a World Bank report

Industry coalition SEA-LNG is continuing to push its case that shipping needs to use LNG in face of calls from environmentalists, particularly in Europe, not to invest in LNG but to encourage the development of alternative fuels.

In a recent, assertive press release the organisation stresses that "LNG fuels reduce up to 23% of GHG emissions, and that bio- and synthetic-LNG offer low risk, incremental pathways to net zero".

It argues: "Waiting for future fuels and not fully utilising LNG, which is safe, proven, competitive and available today, is a mistake. We need to take advantage today of the confirmed reduction in GHG of up to 23% (Well-to-Wake) and the obvious air quality benefits of LNG as a maritime fuel. To continue to wait for unproven alternatives only makes the current GHG and local emissions problems worse."

SEA-LNG is critical of the recent World Bank report The Role of LNG in the Transition Toward Low- and Zero-Carbon Shipping. According to SEA-LNG the report attempts to prescribe solutions and predict the timing of future technology development. SEA-LNG says that it strongly believes that the "transition to future fuels must not follow this prescriptive approach". It argues: "It is far too early to decide what the real potential of various alternatives fuels will be for such a highly complex, hard-to-abate, global industry."

SEA-LNG puts its case as follows: "Theoretical arguments are an important starting position, but the 50 plus years of proven, safe operational experience that the Industry has with LNG speaks for itself. Further, bio and synthetic LNG offer an incremental pathway for the decarbonisation of the global shipping industry – one that is already being implemented by a growing number of shipowners. The existing LNG infrastructure is being used today and is interchangeable with its bio and synthetic cousins, thereby providing a low risk, long-term decarbonisation alternative.

"By focusing on theoretical, unproven solutions, the World Bank stifles innovation in technologies that can also provide answers in the decades ahead. We strongly encourage all institutions around the globe that have a place in the policy debate to set standards and targets that drive real and immediate reductions in GHG emissions not prescribe specific technology solutions that are untried and unproven in the real world.

"To suggest that investments not be made in the LNG sector is unwise, will prolong the use of higher emissions fuels and slow down shipping's decarbonisation.

"Technologies are constantly evolving, and it is essential to use up-to-date data when evaluating different propulsion alternatives for the maritime sector. Based on the primary data and methodology of SEA-LNG's latest research, we are unequivocally confident that Sphera's 2nd Lifecycle GHG Emission Study on the use of LNG as a Marine Fuel is the definitive study on the essential role that LNG has to play in shipping's pathway to decarbonisation. The findings are based on the latest primary data, assessing all major types of marine engines and global sources of supply, follows ISO standards and is peer reviewed by neutral academics. This is in contrast to some of the studies that the World Bank cites which are based on out-of-date technologies used in niche maritime operations."

"The SEA-LNG study...shows that LNG as a marine fuel provides GHG benefits of up to 23% on a Well-to-Wake (WtW) basis and up to 30% on a Tank-to-Wake (TtW) basis compared with current oil-based marine fuels.

"While methane slip is an issue that needs to be addressed, its effect must be quantified using up-to-date and accurate information. Using current engine information, as the SEA-LNG study does, shows that methane slip does not impact LNG's GHG reduction potential to the extent that the World Bank report claims. LNG engine solutions are already in use today with minimal methane slip. Manufacturers are on a pathway to continue to reduce methane slip even further through measures which include design changes, and the implementation of advanced combustion algorithms. LNG-fuelled vessels being built today have much lower levels of methane slip than what is often cited in academic studies, including the IMO 4th GHG study. As Peter Keller, Chairman of SEA-LNG recently noted, "often based on outdated data, methane slip has become an overused argument for those wishing to justify inaction."

SEA-LNG continues: "The World Bank report also fails to acknowledge the very rapid acceleration in the availability of Bio-LNG. The European Biogas Association expects a ten-fold increase in Europe by 2030 and according to a study by the International Energy Agency (IEA), every part of the world has significant scope to produce biogas and/or biomethane, the gaseous form of bio-LNG. The 2020 Bio and synthetic fuels study by CE Delft highlights that large-scale bio-LNG supplies produced from sustainable biomass resources could be available in the 2030s, presenting the maritime sector with a safe and scalable alternative fuel.

"While highlighting green ammonia and hydrogen as the only viable future fuels, the World Bank report fails to mention the major challenges associated with these fuels. Considerable research and development as well as extensive operational testing is still needed. Major technological and regulatory hurdles need to be overcome before ammonia and hydrogen can be safely used as fuels in the marine environment. Investment cases will be hindered by the low energy density of these fuels.

The massive investments that will be required in new infrastructure will have to be co-ordinated with ship-owners and other stakeholders. The World Bank's untested theoretical approach risks delaying the shipping industry's decarbonisation and at worst it can lead the industry down a technology cul-de-sac.

"The global health benefits resulting from the use of LNG as a marine fuel are well known and accepted. LNG-fuelled vessels emit virtually no SOx while dramatically limiting emissions of NOx. It also virtually eliminates particulate matter, including black carbon or soot, which while not yet regulated, is an environmental concern. We should not miss this opportunity, especially in developing economies where air pollution is a significant and growing problem.

SEA-LNG concludes by saying: "By investing in LNG dual-fuelled vessels, the shipping industry begins the decarbonisation process now. This creates a direct pathway to significantly lower carbon emissions and facilitates the introduction of zero-carbon alternative fuels as and when they become commercially and operationally viable.

"SEA-LNG encourages informed debate of future fuels. It is important however, to base this debate on objective, up-to-date lifecycle analysis and recognise that we need to start with proven technologies not future concepts that are currently no more than wishful thinking."

Battery hybrid PCTC launched

In what United European Car Carriers (UECC) called "a major step toward achieving sustainable shipping", the first of its three LNG battery hybrid PCTCs being built by Jiangnan Shipyard in Shanghai was launched in April. The remaining two vessels are scheduled for delivery in 2022.

The new UECC PCTCs meet Tier 3 IMO NOx emission limitations in place for the Baltic and North Sea. All three will be equipped with battery hybrid solutions that will "enable UECC to far exceed the IMO's target of 40 percent reduction in carbon intensity by 2030".

The ships are also equipped with dual-fuel LNG engines for main propulsion and auxiliaries. As more biofuels are set to become commercially available in the future, UECC plans to increase the proportion of carbon neutral and synthetic fuels in their future fuel mix.

LNG bunkering at Singapore

What was described as the first ship-to-container ship LNG bunkering operation in Asia took place at Singapore in March. The CMA CGM Scandola was fuelled with 7,100 cubic metres of LNG from Singapore's first LNG bunkering vessel the FueLNG Bellina.

Senior Minister of State for Transport and Foreign Affairs, Mr Chee Hong Tat, attended the launch of the bunkering operation and said: "The use of more sustainable fuels is an important element of the decarbonisation strategy. As the shipping industry explores alternative zero-carbon fuels, LNG is a viable transitional fuel. As a global bunkering hub, we are pleased to partner CMA CGM, FueLNG, Keppel Offshore & Marine and Shell Eastern Petroleum, to provide more sustainable bunkering solutions for the shipping industry. It also marks another major milestone as Asia's first ship-to-ship LNG bunkering operation with simultaneous cargo operations."

The CMA CGM Scandola is the first of six new 15,000-TEU LNG-powered container ships which CMA CGM Group has lined-up to be bunkered in Singapore this year. These ships will be deployed on CMA CGM's MEX 1 service between Asia and the Mediterranean.

The stem was also the first ship-to-ship operation for the FueLNG Bellina. Designed and built by Keppel O&M, the 7,500 cubic metres vessel is expected to carry out about 30 to 50 ship-to-ship LNG bunkering operations in 2021.

LNG tanks for big box boats

French-based technology and engineering company GTT (Gaztransport & Technigaz), has received Approval in Principle (AiP) for its NO96 containment system application as an LNG fuel tank for ultra large container vessels (ULCVs) from the classification society DNV GL.

The company, which specialises in the design of membrane containment systems for the transport and storage of liquefied gas, and DNV GL reviewed the compatibility of the NO96 technology within a container vessel hull to ensure that the integration of such a containment system is fit for purpose. Under the AiP procedure, a sloshing assessment of the containment system has also been performed.

Philippe Berterottière, Chairman and CEO of GTT, said: "This Approval by DNV GL now allows us to offer to the ship-owners two membrane technologies: Mark III technology, which has already been certified, and NO96. NO96, already used in over 200 LNG carriers, represents a reliable and competitive solution which is particularly well adapted to ULCVs fuel tanks."



UECC's first LNG battery hybrid PCTC on the water



Turkey has banned scrubber washwater discharge ©Paolo O/CC-BY

VOLATILE PRODUCTS

While Turkey has added a scrubber bombshell to existing uncertainties, Greek bunker suppliers are desperately hoping to see passenger ships return, as John Rickards writes

Turkey and its bunker sector have endured a tumultuous year, with tough local lockdown measures following the (at the time of writing) fifth highest confirmed Covid caseload in the world. At the same time, the country's economy - passenger shipping aside - was able to open to a large degree over the second half of 2020 and a very active vaccination program is underway. ***World Bunkering*** spoke to Energy Petrol CEO and chairman of the Turkish Chamber of Maritime's bunker committee Mustafa Muhtaroglu to get an idea of the situation on the ground - and the outlook for the rest of 2021. His verdict? Something of a mixed bag.

"2021 so far is not very brilliant but very unstable, very volatile. The market is trying to find ways following news on vaccinations, the number of cases, lockdowns, recovery news, etc... Nothing is yet balanced, moving on changing news every day, which makes all segments very difficult to manage, so first we need some kind of stability in the markets.

"Surprisingly, the shipping markets have been good. Freights are healthy, helping the supply chain to be maintained. However, we do not still see good markets, high demand for the bunker industry. Bunker demand in most areas is still low and very much changing, very volatile. While supply is good, plenty of products are available everywhere which stresses the markets and almost all players are working in a 'no margin' situation, relying on good earnings in 2019 and partly in 2020. However, this seems unsustainable so we have to see something happen at some point, maybe consolidations, maybe withdrawals. To be realistic, the market needs to find its new balance.

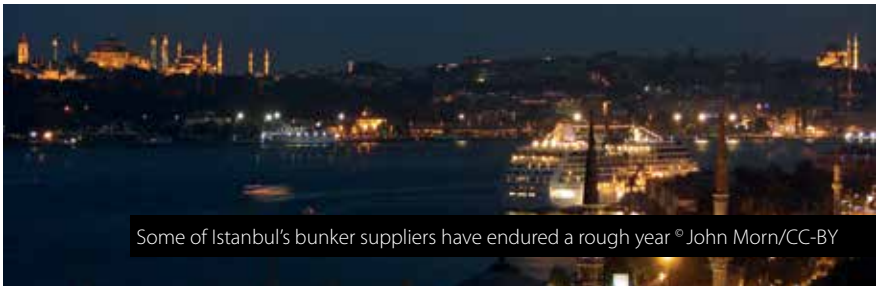
"At this point we have to take into consideration new fuels. We read a lot of new things every day about new fuels including LNG, ammonia, methanol, biofuels and hydrogen etc. To reach IMO emission goals we need to find new fuels for shipping.

"We started with LNG and already some 200 ships are LNG-powered along with several newbuilding orders especially by container lines. In this concern, we also see several LNG-supplying barges available already.

"Turkish state company BOTAŞ is ready for LNG bunkering from their plant near Istanbul. However, no LNG barge is available yet, so we have to wait and see when physical deliveries can start – while following news about LNG being described as not good enough for emission goals and the World Bank recently announcing that ammonia and hydrogen are future fuels for shipping. So we have to really wait and see all such developments.

"The Turkish bunker market in fact managed the 2020 transition period and the pandemic situation very well. We have strong, well-established, solid companies so we have not suffered much. Yes, the market can't generate profit, but at least it's keeping its position in the region. Sure, volumes have decreased compared to their historical high in 2018, but losses in 2020 remained only 10%.

"To be honest, the 2018 record level of 3 million tonnes was achieved after 20 years of effort and investment, so it's not easy to reach the same levels for a new product like VLSFO which is not produced in Turkey. We are now a 100% import market for VLSFO, the main bunker fuel for shipping. Istanbul's bunker market grew on the basis of supply security offered by Turkish refineries. Yes, they have never been the biggest source for the bunker market, however they were playing a very critical role by means of supply security and regularity with a very stable pricing mechanism.



Some of Istanbul's bunker suppliers have endured a rough year © John Morn/CC-BY



Now we have completely new market conditions, new products, import basis avails and a very new pricing mechanism based on ICE gasoil quotes, plus the pandemic situation affecting demand and operations very much, which all need time to be stabilised. Then we can make it grow again.

"I can say the main Turkish players are healthy, long established, financially strong and already completed their investments. We have over 60 bunker barges and over 250,000 cubic metres bunker storage capacities so we can say the Turkish market is always on track and ready to be the best alternative for ships for the best quality bunker supplies in the area."

Celebrating the addition of a new tanker to his company's fleet in March, CYE Petrol CEO and Turkish Bunker Association head Deniz Eraydin was perhaps more damning.

"The number of ships passing through the Turkish Straits has decreased by 15% in the past 8 years," he said. "On the other hand, the bunker supply tonnage we have at our ports increased from 1.4 million tonnes in 2013 to 3 million tonnes in 2018. This level decreased to around 2.2 million tonnes in 2020 as a result of the wrong choices of the private sector, the dubious efforts of the sector's representatives, and the insistence of our bureaucracy on faulty practices and ignoring all warnings. By 2020, 3.5 million tonnes should have been passed."

Regulations affecting the more efficient bunkering of larger vessels were the principal target for his ire. "We are of the opinion that there are generally two reasons for the decrease in the number of ships passing through the Turkish Straits. First, the shrinkage in the global economy. Second, the tonnages of the newly commissioned ships are larger than the old ones. When you examine the sector in this framework, it can be understood that there is piecemeal growth in the portions of refuelling made to large ships.

For example, in the past, we were supplying 2000 tonnes at a time to a ship that made a voyage on a certain line. Now we are refuelling 3500 tonnes at a time to the ship operating on the same line. Therefore, tankers with a size of 2,000-4,000 gt that can supply higher amounts at a time are needed. On the other hand, our bureaucracy requires the application of a pilot to tankers above 1,000 gt for safety reasons.

"This contributes nothing to safe operation, but due to this practice, which causes delays and high costs, the Turkish bunker sector is forced to use tankers below 1,000 gt. [Those] tankers are also needed. But there are six tankers of [under] 1,000 gt, twice as much as you need. We do not have enough tankers over 1,000 gt to meet international demand. As far as I know, there are around 150 commercial Turkish-flagged tankers in the world. 70 of these 150 tankers serve as 'bunker carriers' in our sector. "As it can be understood from here, our 'Turkish commercial tanker fleet' has been shaped incorrectly as a result of the insistence on the application of wrong rules incompatible with international operations. While tankers below 1,000 gt could not find enough jobs, large tonnage jobs were lost to rival ports due to insufficient tankers over 1,000 gt. We hope that our bureaucracy, which has preferred to maintain this negative experience, despite all the warnings we have given since 2017, will do what is necessary as soon as possible."

Strong words, and Turkey's maritime authorities have introduced some new rules of interest to the bunker market, but not relating to bunkering operations and tonnage limits. Instead, Turkey joined the ranks of port states banning open-loop scrubber washwater discharge within its waters, based on its marine pollution regulation.

Owners of the pro-scrubber pressure group the Clean Shipping Alliance were understandably frustrated. "We understand that Article 23 of the Regulation is intended to protect against the disposal of liquid or solid waste from vessels and their cargoes," said chairman Capt Mike Kaczmarek. "But unlike the clear examples in the regulation, washwater from exhaust gas cleaning systems should not be interpreted as a form of marine pollution. These systems have been in use for decades and there is absolutely no evidence of any negative impact on marine life or sea water quality, neither in open waters nor in port environments."

"Decades" is doing a lot of work in that statement given that marine scrubber installations were still very much in the trial and effluent-evaluation phase from the mid-Noughties to the early 2010s, but the point is genuine. On the other hand, it's hardly surprising if port states, rightly or wrongly, adopt an increasingly precautionary approach.

There are no such fears yet in Greece, where owners and operators have continued to invest heavily in scrubbers, not least of all the cruise lines that represent such an important chunk of the country's bunker sector. Cruising was almost non-existent in 2020 but is due to recommence in Greek waters at the time of writing, with German operators Tui and Aida the first back in the water while NCL and Celebrity are scheduled to follow later in the summer. Priority vaccinations given to the tourism sector and the Greek islands, coupled with stringent testing requirements and green-lighting of international travel to and from Greece, should, operators hope, make for a successful season - and a consequently improved year for bunker suppliers whose volumes were hammered in 2020 by the loss of the passenger sector.

Suppliers certainly spent the late stages of 2020 expanding their Greek operations, presumably in anticipation of a sharp recovery. UK-based Propeller Fuels opened its first Athens office in November. Fratelli Cosulich set up its new trading arm in Greece at the turn of the year, describing it as "one of the most important markets in the shipping industry" and one it had been "looking at for a long, long time". Greece's own Finecor expanded into the north and central ports of the country in November too, being given a bunkering licence to load fuel from Hellenic Petroleum's Thessaloniki refinery. And, aiming to reduce demand for all those suppliers' products, Maersk fuel efficiency software offshoot company ZeroNorth opened an office in Piraeus in February.

ZeroNorth CEO Søren Meyer said: "We are extremely excited to open our Greek office, giving us a presence in shipping's largest ownership market. At a time when more of shipping is embracing digitalisation with increasing pace, we think it is important to support Greek owners and operators to optimise their operations and profitably decarbonise.

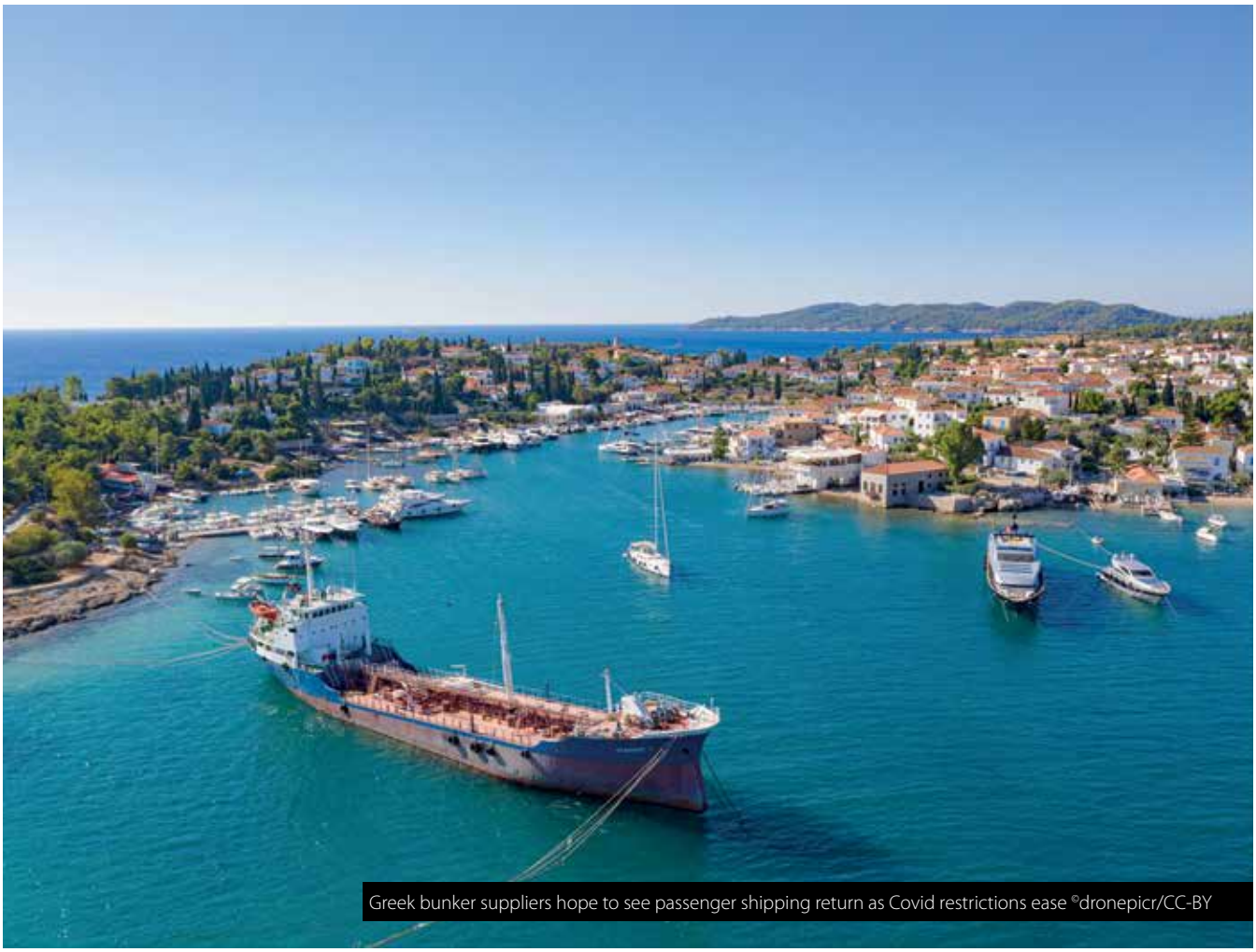
"This move means that we can work closely with Greek tramp shipping market leaders to explore how [the company's software system] Optimise can generate increased revenue and reduced emissions. I am confident that Greece's vibrant and close-knit maritime community will immediately understand our vision of digitalising shipping for the climate and join with us in our efforts to create more economically and environmentally sustainable operations."

It has local competition, though, in the shape of Metis Cyberspace Technology. The company, which has been developing its own analytical software evaluating financial, operational and emissions implications in ship operation for the past few years, says it's not the first such firm offering a tool able to advise owners about the trade-off between emissions reduction and debt servicing under Poseidon Principles financing.

"Assessing whether ships merit further investment to keep pace with the IMO average efficiency ratio (AER) underpinning the principles will be key but, to date, exact emissions targets have not been forthcoming," the company said. It touts its system as the first viable methodology allowing owners to predict whether their ships would benefit most from investment, a change in operating profile or disposal in response to advancing emissions rules, and perhaps to lower borrowing costs for owners with vessels outperforming AER.

CTO Serafeim Katsikas said: "We have built on the Metis infrastructure, drawing on signals from the ship and external sources to create structured and meaningful indexes for the Poseidon Principles. Following the recent launch of Metis Charter Party Agreement ship performance monitoring, we are bringing another maritime game changer to market. Already, a pilot has seen one owner conclude that, while some of its ships may never need investment to cut emissions and others need action now or at a future date, two should be disposed of immediately."

"The machine learning METIS deploys retrains automatically every month and evaluates itself every seven days, so we can find out the correlation between weather, hull fouling, power use, fuel efficiency and so on. This is invaluable for evaluating new technologies, but also for voyage analysis for correcting common errors."



Greek bunker suppliers hope to see passenger shipping return as Covid restrictions ease ©dronepicr/CC-BY



PANDEMIC HITS RUSSIAN MARKETS

Olga Bogacheva reports lower port throughput in 2020 as oil exports slumped, and a big drop in bunker sales

Total cargo passing through Russian ports in 2020 totalled 820.8 million tonnes, 2.3% down year on year. The decline was caused by a sharp reduction in oil exports. Modest growth of dry cargo throughput was not enough to compensate for the drop in oil cargoes.

The most significant drop was in the ports of St. Petersburg and the Leningrad Region, down 6% to 231 million tonnes. Such a pronounced reduction has not been experienced for many years. Throughput had increased every year since 2009 except 2018. However, the situation was better in other regions. Throughput increased by 9.5% in the Caspian ports and by 4.6% in the Far East.

Last year's lower figures were entirely due to the effect of the pandemic on the global economy. However, the situation is forecast to improve soon. As stated in the government's draft transport strategy, by 2035 cargo throughput at Russian seaports should have increased to 1.4 billion tonnes, and total port capacity should have grown by 68%, to 1.9 billion tonnes a year.

Russian bunker market in 2020

With the unprecedented events of 2020 hitting most sectors of the world economy, bunkering in Russia was, unsurprisingly, badly affected.

Volumes fell by 27.5% to a disappointing 7.9 million tonnes in total for all types of fuel. The market leaders kept their positions. The bunker divisions of vertically integrated companies - LUKOIL-Marine Bunker, RN-Bunker and Gazpromneft Marine Bunker remained at the top of the list of market players.

Most of the bunker fuel was sold in the North-Western region (including the Arctic) – about 3 million tonnes. This was 20% less than in 2019.

At St. Petersburg, the largest port in the North-West, fuel sales fell by 9% to 1.2 million tonnes. This was in large part because all cruise ship calls were cancelled. Unlike the country's other regions, the four suppliers at the top of the list in St. Petersburg included two independent companies; Baltic Fuel Company and Nevsky Mazut which were in second and fourth place respectively. However, LUKOIL-Marine Bunker accounted for 40% of the total fuel supplied, with sales of nearly 500,000 tonnes. That was twice as much as Baltic Fuel Company delivered. Gazpromneft Marine Bunker took 16% of the market while Nevsky Mazut had 9%.

In the ports of the Far East, fuel sales fell by 47%, totalling 2.4 million tonnes. The main reason was the lack of supplies which resulted in uncompetitively high prices, but there were also problems with the quality of fuel.

The ports of the Southern Region survived 2020 with the smallest drop in sales. Bunkering companies there delivered 1.9 million tonnes of fuel, only 2.7% less than in 2019.

New oil refinery in the Far East "needed"

Deputy Prime Minister Yuri Trutnev said recently that it is necessary to build a new oil refinery in the Far East.

He said that action would be taken to respond to a lack of fuels, both marine and automobile, that occurs regularly in the region. Estimated total demand is about 6 million tonnes but only 4 million tonnes are produced in the region. The rest is delivered by rail, which makes it impossible to ensure continuity of supply and competitive fuel prices.

An acute shortage of gasoline in the Khabarovsk Kray and in other Far Eastern regions arose in the first quarter of 2020 after a shut-down at the Khabarovsk refinery due to technical problems. Because that problem affected thousands of people and became a public concern, the refinery has been taken under federal control and at the time of writing, it was expected that production would resume soon.

Low-sulphur fuel sales soar
Gazpromneft Marine Bunker reported that in 2020 the company sold 1.1 million tonnes of ULSFO and VLSFO, 350% up on 2019 and reflecting the introduction of IMO's 0.50% sulphur limit. This represents approximately 20% of the market for low-sulphur and ultra-low-sulphur bunker fuels in Russia.

One third of this amount was delivered in the Baltic and Arctic ports. To supply vessels on the Northern Sea Route, Gazpromneft Marine Bunker deployed the bunker tanker Gazpromneft Nord-East, previously based in St. Petersburg, to Murmansk.

Meanwhile RN-Bunker more than doubled its supplies of ULSFO and VLSFO, delivering some 1.3 million tonnes in 2020. It also delivered about 300,000 tonnes of HSFO.

Omsk Oil Refinery upgrades
Gazprom Neft's Omsk Oil Refinery has upgraded its fuel shipment management system at its terminal. The new system is said to ensure maximum accuracy in the delivery of petroleum products and minimises the influence of human error.

Automation is being carried out as a part of a comprehensive programme for the development of the production management system of the Omsk Refinery.

A number of new control functions are integrated into the modernised system. On receiving a request for fuel, the system selects a tank with the right amount of product, checks the availability of a quality certificate for a batch of fuel and proceeds to deliver it.

Belarusian oil exports going through Russian ports
In March 2021 the St. Petersburg Oil Terminal and Ust-Luga port received the first shipments of Belarusian oil products for export to third countries.

Belarus exports about 10.5 million tonnes of petroleum products a year, including about 6 million tonnes traditionally handled through Klaipeda and Ventspils in Lithuania, and Riga in Latvia.

Negotiations on redirecting the transit of Belarusian oil products from the ports of the Baltic States to Russia started many years ago.

Russia says that as the fuel is produced from Russian oil delivered duty-free via Russian infrastructure. Arguments against this development included expensive logistics due to the longer delivery route from refineries in Belarus to the berth in Ust-Luga.

Finally in February 2021, under political pressure, an intergovernmental agreement on transshipment of more than 9.8 million tonnes of Belarusian fuel oil, gasoline, gas oil and oil through Russian ports was signed. It is valid to 2023 with an option to extend.

It is expected that about 1.8 million tonnes of oil products from Belarus will be handled in 2021.

Also, it is expected that all other types of Belarusian export cargoes will be shifted to Russian ports in the same way. Cargo for Russian destinations will also increasingly be switched away from the Baltic States' ports to Russian ones.

Russian fishing fleet to receive fuel subsidies
A draft decree issued by the Government of the Russian Federation has been announced. It provides for partial reimbursement of the cost of fuel purchased by fishing vessels. It is expected that subsidies will be paid during the current pandemic and could be as much as 30% of fuel costs if certain conditions are met.

It is expected that the fuel subsidy will accelerate the development of the fishing industry.

Cost of ship calls to Russian ports increased
Since March, port authorities have started to charge an investment fee on ship calls. The law authorising these charges was adopted in 2019. The fee will be applied to vessels engaged in foreign voyages.

The new fee will inevitably make ship calls more expensive and so in the two years since the approval of the regulations, Russian port-related businesses have been trying to postpone their entry into force or cancel them entirely.


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САМОРЕГУЛИРУЕМАЯ ОРГАНИЗАЦИЯ
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'Current state and prospects for development of the Russian bunker services market'

- 2020 global and Russian bunker markets review. Market dynamics and their impact on supply & demand, and price developments
- Experience in the use of new low-sulfur fuels, their quality and analytical methods
- Problems with the quality of low-sulfur fuels in the Russian Federation
- Formation of the Russian LNG bunkering market
- Excise taxes on bunker fuel – the practice of paying and returning tax
- Results of the administrative reform on the implementation of the regulatory guillotine mechanism – what has changed for the bunker market?
- Scrubbers: performance, economics and prospects for their use
- Prospects for the development of Russian ports and shipping industry

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Experts estimate that the cost of a port call will increase by 10%, and for container ships in the Far East it will be three to four times more expensive than a call at a Chinese port.

The revenue from the fees is intended be used for the construction and reconstruction of infrastructure facilities at the seaports.

Port facilities to be moved away from St. Petersburg

A letter proposing the redevelopment of the site of the Big Port at St. Petersburg has been sent directly to Vladimir Putin. The author of the initiative is Andrey Bokarev, the head of Transmashholding. The preferred alternative proposed site is at Ust–Luga, about 120 kilometres from St. Petersburg.

According to a report in Kommersant, more than 20 companies would be moved outside the city, including the Seaport of St. Petersburg, the Container Terminal of St. Petersburg, the Baltic Bulk Terminal, the First Container Terminal, Petrolesport, the Baltic Ship-Mechanical Plant and others.

In addition, it is proposed to remove the Baltic Shipyard, Severnaya Verf, Admiralty Shipyards, parts of the United Shipbuilding Corporation, as well as Kirovsky Zavod from St. Petersburg.

It is proposed that the 600 hectares currently occupied by these companies should be used for residential and commercial buildings.

The project is intended to be mainly privately funded but with assistance of public-private partnerships.

Bokarev's letter of was reviewed by the President and redirected to the Prime Minister Mikhail Mishustin for consideration with the ministries and regions.

Industry experts agree with the advantages of the port's location outside the city, but they are generally quite sceptical, foreseeing resistance from the owners of the port assets.

They emphasise that a thorough analysis and wide discussion with all stakeholders is necessary.

Discussions about moving the port from St. Petersburg have been going on for more than 10 years. The topic was raised again in 2018 but has only now reached the president's attention. This could mean big changes are on the way.

The Big Port of St. Petersburg, located in the Neva Bay of the Gulf of Finland and covering the mouth of the Neva River, is one of the biggest in the north-west of Russia. In 2020 its throughput was about 60 million tonnes.

Ust-Luga is the second largest port in Russia in terms of cargo handled, after Novorossiysk (103 million tonnes), and the first in terms of potential handling capacity (190 million tonnes).





PureteQ

THE SCRUBBER MAKER

PureteQ scrubber systems feature the lowest OPEX in the business and are easy to install. We have now simplified the installation further in our Generation II scrubber, which potentially will reduce the shipyard installation cost by double-digit percentage.

All scrubber systems come with state-of-the-art intuitive control systems with full remote accessibility. In times like these, it is very convenient to get 24/7 remote on-line support/ guidance to ship crews from certified Marine Engineers.

We are presently releasing a newly developed cloud-based software for optimizing of scrubber systems across fleet and scrubber makes. It features the measuring of MARPOL compliance, operational performance (impact on SFOC) as well as environmental performance reporting, such as CO2, Sulfur and PM reductions. The software will enable sharing of learnings between crews, resulting in lower energy consumption and other OPEX. The software is a perfect match to new IMO regulation on EED(X)I & CCI when well to wake principle applies.

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PURETEQ

OPTIMIZING SCRUBBER PERFORMANCE ACROSS FLEET

PureteQ – THE SCRUBBER MAKER

PureteQ designs, delivers and commissions built-to-fit maritime scrubber systems for open loop, hybrid ready and fully hybrid (closed loop, with and without bleed-off) operation to shipowners who want to save money on fuel by continuing use of heavy fuel oil. Recently, we have seen the price span between compliant fuel and HFO increase, and interest for scrubber systems are increasing with the growing price span.

All PureteQ scrubber systems come with state-of-the-art intuitive control systems with full real time remote accessibility. In times like these it is very convenient to get 24/7 remote on-line support/guidance to ship crews from our certified Marine Engineers. This feature has contributed greatly to all our customers gaining a competitive advantage. We also perform modular training of crews and officers as well as onshore personnel.

PureteQ has developed the Generation II Scrubber to reduce total cost of installation (by double digit percentage) considering the learnings from installing more than one hundred scrubbers on different types of ships at various shipyards around the world.

PureServ – THE SERVICE PROVIDER

PureServ is PureteQ's dedicated service organisation. We offer fair-priced Service Agreements designed to meet shipowner's specific needs based on the ship's operational pattern and qualification of crew. All clients with a PureteQ Service Agreement have a designated Service Engineer and according to agreement; you only pay for what you get.

Our Service Team has received extensive training to assist shipowners in safeguarding continuous operation, reliability, and MARPOL compliance of their scrubber systems. This entails expert support and guidance for all Scrubber Systems on-site or via the safe PureteQ remote system, depending on the ship's conditions and the client's requirements. Our validated concepts allow us to assist the crews from remote with trouble shooting, advice on operation and maintenance as well as optimization.



For shipowners and operators with internet access, we offer a remote Scrubber System Modular Training Program. In times where crew changes often, "touch and go" remote training has high value for all stakeholders. Some shipowners even choose to have the onshore employees participate in the Remote Specialist Training. In general, training cannot be overestimated as it leads to higher up-time and compliance rates as well as better performance and less cost of operation.

Cloud-based Fleet Performance and Optimization tool

We are presently releasing a newly developed cloud-based software for optimizing of scrubber systems across fleet and scrubber makes. It features the measuring of MARPOL compliance, operational performance (impact on SFOC) as well as environmental performance reporting, such as CO_2, Sulfur and PM reductions. The software will enable sharing of learnings between crews, resulting in lower energy consumption and other OPEX.

Savings are based on comparison between HFO with scrubber and compliant fuel and we have taken the lesser positive report from SINTEF into account as well as actual test performed by 3rd party, on sailing installations. The software is a perfect match to new IMO regulation on EED(X)I & CCI, when well to wake principle applies.

The solution is presented to stakeholders in shipping and seems to be of particular interest for shipowners and ship managers, who operate scrubbers of many brands.

For many shipowners, it may have started out with one or two brands but now, many already have several scrubber brands installed in their fleets, making it hard to compare performance across the fleet. Therefore, we have expanded the software to be able to support scrubber systems, which are not as digitalized as PureteQ scrubbers.

The tool is free of charge for all customers with a PureteQ service agreement or who have purchased a PureteQ Scrubber System. PureteQ PureServ is privileged to quote service agreements for scrubber systems of any brand.

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PureteQ Marine Engineer making calibrations to a scrubber test skid

PUTTING THE CASE FOR SCRUBBERS

Exhaust Gas Cleaning Systems Association (EGCSA) Director Donald Gregory explains why he believes scrubbers have a promising future and that the trade association has an important role to play

With late orders, high demand and then a major uptick in wet bulk freight rates, the period after the entry into force of the IMO 2020 sulphur limit was fraught with challenges, not least shortages of yard space, skilled labour and in some cases ship operator support. Nevertheless, the members of the EGCSA successfully delivered over 3,500 exhaust gas cleaning systems.

Towards the end of 2020, EGCS orders were definitely in the doldrums with the peak of orders having being delivered and commissioning in progress or completed. But there were remaining orders that had been placed but not delivered due to vessels being re-deployed to take advantage of the high freight rates and delays due to yard availability.

As 2021 has progressed there is now a significant uptick in enquiries and orders. Many of the owners that fitted EGCS had only installed on less than 30% of their fleets. Given the excellent service, significant savings in operating costs and the gradual widening of the fuel differential orders have been increasing, owners with previous experience have been placing more orders or re-instating orders that were previously postponed.

It is clear that the EU Commission report prepared by Purvin and Gertz has been entirely borne out as they predicted with the majority of high power, high fuel consumption vessels installing EGCS. Many achieved pay-backs in less than six months despite a narrower price difference between IMO 2020 compliant fuels and high sulphur residual fuels. Ships fitted with EGCS have also been pretty much immune from operational problems related to the switch to IMO 2020 fuels.

The use of EGCS has also helped to mitigate the massive forecast increase in CO_2 emissions caused by an increase in daily global crude consumption of around 1million barrels. Although the IMO 2020 driven increase in global CO_2 emissions was not as much as forecast, the ships fitted with EGCS have achieved at least a 10% reduction in well to wake CO_2 emissions when compared to those ships using IMO 2020 fuels. Worryingly this is a key fact that the vocal NGOs choose to ignore when making unfounded claims about the impact of EGCS.

EGCS reliability and uptime has been outstanding. Unfortunately, as ever those who have sought to purchase systems from non-EGCSA members have had minor to extreme problems, in some cases resulting in the scrapping of the total installation. Many of the opportunist companies claiming to be able to design, install and commission EGCS no longer exist. They have often left unwise customers stranded or seeking remediation solutions from EGCSA members. Needless to say, those companies that no longer exist were not EGCSA members.

Any EGCS related problems are damaging to the EGCS industry and put seafarers under unfair stress. To attempt to avoid these sorts of incidents the EGCSA will be publishing and making freely available on its website best practice guidance. These will be published over the coming months on the www.egcsa.com website. Owners and operators should take note.

Best practice has not been observed by a few ports that have decided to ban the use of open loop EGCS in their jurisdictions. This is despite these same countries being involved over a number of years at the IMO's Marine Environment Protection Committee (MEPC) meetings agreeing to alternative compliance as defined in Regulation 14 of MARPOL Annex VI.

Having no evidence, the argument often promulgated is the EU Commission's precautionary approach philosophy. Given that the precautionary approach has been set aside in the desire of the EU Commission to re-start tourism in Covid-19 challenged EU nations,



it seems that the precautionary approach only applies where there are no financial implications involved.

Ports continue to allow vessels with approved BWMS to discharge waters from foreign territories into their ports and estuaries. These systems often apply noxious substances in the sterilising process. The EGCSA has observed that the BWMS discharges are not dissimilar to the discharges from EGCS except that the water discharged from an EGCS is local water and not water transferred from abroad.

The IMO marine environment expert group known as GESAMP have developed methodology to assess the possible impact of discharges and have a prescribed system of assessment. The assessments are relevant for open seas and enclosed ports. The discharge water is assessed for toxicity and then the results of that assessment are applied to a mathematical model known as "MAM PEC", which assesses the impact of specified total cumulative discharge volumes and returns values which indicate risk or no risk.

The EGCSA members have recently adopted the process which will become an ongoing assessment system. The latest results, which will be published in the summer of 2021, indicate that EGCS is not toxic and meets the requirements of the MAM PEC evaluation.

The EGCSA intends to invite ports to participate in this science-based means of assessing risk to their assets which might or might not be caused by the operation of EGCS in their jurisdictions. The assessment will not only take into account water risk assessment but also the risk associated with air quality. In many ports air quality is a significant concern to adjacent populations.

The first 18 months of global EGCS rollout has been uneventful, reliable, economic and safe. This bodes well for the further development of EGCS which will include carbon capture and removal of other harmful emissions including harmful emissions when diesel engines use alternative fuels such as LNG and Methanol. Both branches of the future technology are currently under active development with some of the solutions ready for shipboard demonstrations. Shipowners/operators who wish to demonstrate their real commitment to a better environment and mitigation of climate change are invited to offer test platforms and support. Their commitment to show off the future cleaner technologies will almost certainly be rewarded with a better knowledge for their future newbuild investment and avoid the possible stranded developments which appear likely with LNG and some other apparently 'easy solutions'. Qualified enquiries will be received by the EGCSA.

PureteQ reinvests

Anders Skibdal, the CEO of scrubber manufacturer PureteQ, told ***World Bunkering*** that his company was investing most of its earnings from the scrubber market into "product improvements and new products to assist shipowners in your journey towards less pollution and providing a path towards shipping's decarbonisation as well as digitalisation".

He commented: "The IMO rules on EED(X)I and CII's are in our opinion very clever, because they force the industry to continuously improve energy efficiency. Right now the system is based on a tank to wake principle and hence not favouring the efficient shipowners, which is unfortunate. But the industry now has a couple of years to come up with smarter algorithms that are based on a well to wake principle. Always using the well to wake principle allow us to make balanced and correct decisions taking the entire lifecycle into account. There is no such thing as carbon neutrality – in real life everything has a carbon footprint."

He noted: "The price differential between HFO and compliant fuels are as expected increasing and what we see in the market is that the most fuel-consuming ships are beginning to order scrubbers again. Many of the new box ships have been ordered with scrubbers installed. Also shipowners that have scrubbers installed are ordering scrubbers for more ships in their fleets. Many scrubber manufactures have like PureteQ focused on total cost of installation and many of the new scrubber systems are faster and less costly to install."

However he said that there were political challenges to fitting. He said: "Among European politicians and NGO's there seem to be an attitude that HFO should be banned and scrubbers be prohibited. Their opinions on scrubbers are not based on scientific data, but merely assume that if you prohibit HFO as a fuel, consumers will automatically switch to green fuels. This is however not possible because these fuels are not available and will not be for years to come if ever."

He asserted: "In fact HFO with a scrubber is much more environmentally friendly than operating on compliant fuels. The uncertainty created will of course turn some shipowners away from scrubbers just as the recent debate on LNG will turn some shipowners away from considering LNG as a transitional fuel. We believe that scrubbers will continue to exist and be installed on vessels that reap economic benefits by doing so. We also see ports ban the use of scrubbers on a precautionary basis. In some instances there may be reasons to limit the use of scrubbers in ports, but in most cases there are not. A new study on eco toxicology by the independent company DHI confirms a previous study carried out by the Japanese Government that found that scrubber washwater is not toxic to sea life.

Asked whether reports of high maintenance costs on some scrubber installations were putting owners off using scrubbers, Skidal replied: "I do not see this as a show stopper, but some shipowners have experienced heavy corrosion on overboard pipes which are very expensive to fix. The reason for these incidents in general derives from the lack of coating and the quality of coating applied when installing the scrubber system by the yard. DNV GL provided advice in a technical paper in 2019 on the correct design of overboard piping which is still valid today. Real time remote access to scrubber systems has proved its value during the pandemic."

He pointed out that many crew are replaced as touch and go and there is thus no handover between crew on managing equipment such as scrubber systems. If not handed over properly,

the result is a lack of maintenance which leads to extensive wear and tear on parts. So instead of replacing inexpensive parts it ends up being an expensive major overhaul. Systems that are regularly maintained according to manufacturer's recommendation are not more expensive to maintain than equivalent on-shore installations. In general maintenance of CEMS systems have been more expensive than originally anticipated by the CEMS manufacturer and the same apply for some of the type approved sensors."

He added that scrubber makers had been on a learning curve as to what alloys to use where and to define the frequency of maintenance. He said: "Costs associated to lack of experience and even in some cases to using the wrong material are a one-time cost and should not happen again going forward. One cannot rule out that the costs associated with bringing the installation quality up to standard have been very high for some shipowners and that this will make them think twice before installing more scrubbers."

HSFO and scrubbers

In a contribution to a rapidly evolving discussion, the Chair of IBIA's Legal Working Group Steve Simms provides his personal opinions on the sale of HSFO to scrubber-equipped vessels

What legal and regulatory questions affecting HSFO demand and supply should suppliers and traders selling fuel to scrubber-equipped vessels expect now?

MARPOL Annex VI, Regulation 18, paragraph 9 for example, continues to require that "parties undertake to ensure that appropriate authorities designated by them require local suppliers to provide the bunker delivery note and sample as required by this regulation, certified by the fuel oil supplier that the fuel oil meets the requirements of regulations 14 and 18 of this Annex; take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note [and] inform the Organization for transmission to Parties and Member States of the Organization of all cases where fuel oil suppliers have failed to meet the requirements specified in regulations 14 or 18 of this Annex".

Since 1January 1, 2019, bunker suppliers' delivery notes for providing over 0.50% sulphur content bunkers, must provide a "declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with regulation 18.3 of [MARPOL Annex VI] and that the sulphur content of the fuel oil supplied does not exceed the purchaser's specified limit value (% m/m), as completed by the fuel oil supplier's representative and on the basis of the purchaser's notification that the fuel oil is intended to be used: in combination with an equivalent means of compliance in accordance with regulation 4 of [MARPOL Annex VI] . . . .".

Regulation 18.3 includes the requirement that the fuel should contain no "added substance or chemical waste" which "adversely affects the performance of the machinery, or . . . contributes overall to additional air pollution."

In 2019 IMO provided its Guidance on indication of ongoing compliance in the case of the failure of a single monitoring instrument, and recommended actions to take if the Exhaust Gas Cleaning System (EGCS) malfunctions. This explains what should happen if a ship fails to meet the provisions of the 2015 EGCS Guidelines (resolution MEPC.259(68))".

The 2019 Guidance requires that: "A system malfunction that cannot be rectified is regarded as an accidental breakdown. The ship should then change over to compliant fuel oil if the EGCS cannot be put back into a compliant condition within one hour. If the ship does not have compliant fuel oil or sufficient amount of compliant fuel oil on board, a proposed course of action, in order to bunker compliant fuel oil or carry out repair works, should be communicated to relevant authorities including the ship's administration, for their agreement".



A scrubber installation. ©Wartsila

Any EGCS malfunction that lasts more than one hour or repetitive malfunctions should be reported to the flag and port state's Administration along with an explanation of the steps the ship operator is taking to address the failure. At their discretion, the flag and port State's Administration could take such information and other relevant circumstances into account to determine the appropriate action to take in the case of an EGCS malfunction, including not taking action.

Consequently, under the 2019 Guidelines, scrubber failure is a serious matter – that those operating the scrubber have only one hour to fix or face potential compliance action which under Resolution MEPC.321(74) (17 May 2019), 2019 Guidelines for Port State Control under MARPOL Annex VI, Chapter 32 can result in vessel detention.

Considering the harsh environment in which scrubbers operate – and potentially difficult maintenance in that environment – scrubber failures (or at least reported ones) have been remarkably rare. But, reported scrubber failures have occurred because of problems with scrubber external support equipment, such as sensors, pumps, pipes and valves. How, though, is the supplier's representative to know and thus certify, that the fuel has no additive that will not "adversely affect" the scrubber? If the scrubber fails, of course, there also will be "additional air pollution."

Also, the "supplier's representative" must be notified of the "purchaser's specified limit value," to "complete" the bunker delivery note and be "notified" that the above 0.50% fuel is "intended" to be used with a compliant scrubber. The supplier must accordingly have means to confirm notification of limit value, which the "purchaser" could set at anything above 0.50%;

Unlike MARPOL Annex VI Regulation 14.2 for ULSFO or 14.1 VLSFO, MARPOL Annex VI, Regulation 4 gives no sulphur limit for HSFO used with compliant scrubbers. The same is true for ISO 8217:2012 and 2017. ISO 8217:2012 Annex C explains that:

The current edition of this International Standard . . . does not include limits for residual fuels. . . . Statutory requirements, i.e. the Revised MARPOL Annex VI . . . allow the adoption of technical solutions to ensure compliance with the emission regulations for sulphur oxides and particulate matter. Therefore, the sulphur content of both distillate and residual fuels is directly controlled by the statutory requirements.

Consequently, the purchaser's responsibility is to define the maximum sulphur content of the fuels in accordance with the ship's engine design, emission control equipment and the prevailing statutory limitations in the areas in which the fuel will be used.

The last ISO 8217 edition which specifies an HSFO/residual fuel limit was ISO 8217:2005.

Consequently, unless there is a specific reference to ISO 8217:2005, charter parties for scrubber-equipped vessels therefore should specify the maximum sulphur content of the fuel consumed with the scrubber – and – not simply specify that the HSFO is to be provided according to ISO 8217. If the fuel the charterer loads exceeds the limit value of the charter party, that could be a charter party breach even if the scrubber otherwise can treat the fuel to be Regulation 4 compliant. The fuel supplier could be in breach of its supply contract with the customer, and in violation of Regulation 18.

In 2020, a little over 50% of all marine fuel sold was VLSFO, while HSFO was about 8%. MARPOL Annex VI, Article 4, as noted above, has no limit on fuel sulphur content as long as a scrubber can process the fuel so that, the SOx exhaust output is compliant. Testing of HSFO sulphur content consequently will remain important and quality disputes over sulphur content in HSFO could increase. This situation also relates directly to bunker sulphur content testing for HSFO provided to scrubber-equipped vessels. That is, even customers using scrubbers must be careful to test within quality claims deadlines, and bunker suppliers confident that the HSFO they provide to scrubber-equipped vessels tests within "specified limit value".

Many bunker sales now are conducted using the BIMCO 2018 Bunker Terms ("BIMCO 2018 Terms"). Those Terms' paragraph 6 ("Documentation") do provide that:

(a) Before commencement of delivery the Sellers shall present for written acknowledgement by the Master of the Vessel or the Master's authorised representative, a bunker pre-delivery form or similar document, duly signed by the Sellers or their representative, which shall contain . . . all information required in accordance with ISO 13739 or any subsequent amendments thereof, including, in particular, the values for . . . sulphur content . . .

Actual use of such a pre-delivery document, however, is relatively rare in bunkering practice. The BIMCO 2018 Terms also state (paragraph 2, "Specifications/Grades/Quality") that:

(a) The Buyers shall have the sole responsibility for the nomination of the specifications and grades of Marine Fuels fit for use by the Vessel.
(b) The Sellers warrant that the Marine Fuels . . . shall comply with the specifications and grades agreed between the parties and stated in the Confirmation Note. Unless otherwise agreed in the Confirmation Note, the Marine Fuels shall in all respects comply with the latest edition of ISO Standard 8217 as per the date of the Confirmation Note.

They state further (paragraph 11, "Compliance with Laws and Regulations") that:

The Parties will not do or permit to be done anything which might cause any breach or infringement of the laws and regulations of the Flag State of the Vessel or the country of incorporation of the Sellers, or of the places where the Vessel or the Sellers trade or take Marine Fuels under the Contract.

What if the bunker supplier becomes aware of an open loop scrubber-equipped vessel which is carrying only HSFO,



is going to a port with a washwater discharge restriction? Can the supplier rely on the buyer's specification, or should the buyer refuse the sale?

Suppose the supplier knows that the vessel also has some ULSFO aboard. To comply both with the BIMCO 2018 Terms and MARPOL Regulation 18, para. 9.6 (requiring suppliers to meet the requirements specified in Regulations 14 or 18), should the supplier inquire whether the vessel has sufficient ULSFO to operate in an area, likely to be an ECA where there also is a washwater restriction (and the scrubber can't be used)?

MARPOL VI requires, flag state authorities are to report MARPOL VI violations on the Regulation 11.4 section of IMO's Global Integrated Shipping Information System (GISIS). Suppose the bunker supplier becomes aware that a vessel has multiple combustion systems, some of which were not connected to a scrubber. Do MARPOL VI and the BIMCO 2018 terms allow the bunker supplier nevertheless to accept the purchaser's notification?

Traders frequently are involved in bunkering the same vessels using suppliers across a number of ports. They frequently are the ones, rather than vessel owners or charterers, communicating vessel requirements to suppliers, including limit values and intention to use fuel with a scrubber. Suppose the trader, observing a vessel's fuel consumption, becomes aware that the vessel will not have sufficient compliant fuel aboard, either to operate with its open loop scrubber in wash water restricted areas, or, to operate shipboard combustion systems not connected with the scrubber. Can the trader still sell only HSFO to the purchaser? Should the supplier, selling to a trader, require confirmation that the vessel has sufficient types of fuel to operate compliantly?

Marine fuel suppliers and traders almost always sell to the quality standards of the 2010, 2012 or 2017 versions of ISO 8217 ("Petroleum products — Fuels (class F) — Specifications of marine fuels"). ISO 8217:2017's Introduction states that: It is the purchaser's and the user's responsibility to establish which statutory requirements are to be met and specify on that basis the corresponding maximum fuel sulphur content to the supplier.

At the same time, ISO 8217:2017 paragraph 5.2 requires that: the fuel shall be free from any material at a concentration that causes the fuel to be unacceptable for use in accordance with Clause 1 (i.e. material not at a concentration that is harmful to personnel, jeopardizes the safety of the ship, or adversely affects the performance of the machinery).

BIMCO Bunker Terms 2018 state that "unless otherwise agreed in the Confirmation Note, the Marine Fuels shall in all respects comply with the latest edition of ISO Standard 8217 as per the date of the Confirmation Note."

INTERTANKO has developed Scrubber Clauses for Time Charterparties, which address issues of scrubber breakdown including vessel off hire, disposal of scrubber waste and provision of compliant fuel if the scrubber breaks down, and also include the following: "Owners warrant that the scrubber has been tested, certified, surveyed and verified as required in accordance with the 2015 Guidelines for Exhaust Gas Cleaning Systems (MEPC 259/68) and any subsequent amendment thereto (the '2015 Guidelines'), is capable of scrubbing fuel oil with a maximum sulphur content of [3.50% / maximum sulphur content warranted by the scrubber manufacturer – delete as appropriate] and will be maintained in a good and efficient state throughout the charter period.

"Owners shall indemnify Charterers for any loss, liability, damage, fines, delay, cost or expense arising from or connected with Owners' failure to comply with the provisions of this Clause.

"Charterers warrant that they will provide fuel oil: with a maximum sulphur content of [3.50% / maximum sulphur content warranted by the scrubber manufacturer in the Scrubber Technical Manual – delete as appropriate] ('High Sulphur Fuel Oil'); in accordance with the specifications in the latest version of ISO 8217 as at the time of supply and/or any other specifications and grades contained elsewhere in this charterparty; that is in all respects fit for purpose and suitable for burning in the main and auxiliary engines of the Vessel.

"Where bunkers are supplied by Charterers in a place where MARPOL Annex VI is in force, Charterers warrant that any bunker suppliers shall be registered if required, and shall comply with Regulations 14 and 18 of MARPOL Annex VI, including the provisions relating to sampling and bunker delivery notes.

"Charterers shall indemnify Owners for any loss, liability, damage, fines, delay, deviation, cost or expense arising from or connected to Charterers' failure to comply with the provisions of this Clause."

Under these INTERTANKO terms, charterers must indemnify owners for violations and charterers must require their suppliers comply with MARPOL Annex VI Regulations 14 and 18.

IMO's most recent guidance on scrubber use generally and washwater discharge limits particularly, is Resolution MEPC.259(68), (adopted on 15 May 2015), 2015 Guidelines for Exhaust Gas Cleaning Systems. These 2015 Guidelines (their section 10) limits washwater contents including pH, PAHs (Polycyclic Aromatic Hydrocarbons) and turbidity/suspended particle matter. In 2021 and 2022, the MEPC will be re-focusing on these Guidelines.

So, bunker suppliers and traders must consider whether the HSFO they provide to scrubber-equipped vessels might cause the vessels to breach the Guidelines' limits.

ORION BUNKERS LIMITED

Delivering quality fuel and services from the day the company started its operations

We have been a highly active player in the Pakistan bunkering market since 2004 and till date have supplied 85% of total market share.

With the introduction of IMO 2020 grades, we are the only supplier who has started supplying LSMGO 0.1 (as local refineries are not upgraded to produce VLSFO now). This means we are once again leading as a premium bunker supplier of Pakistan - no other supplier can supply LSMGO 0.1 because we are exclusive physical supplier of refineries.

As per the recent Pakistan Refinery Limited notification, by the end of 2020 their refinery will be able to produce VLSFO as upgradation of refinery in loop. Once production will start than our market will make a come back with competitive prices, as usual with good availability the refinery is expecting approx. 10KT to 15KT production per month.

We are the only supplier offering ISO 8217:2010 specifications meaning our customers trust that we always supply quality-controlled products.

Understanding the needs of different customers, we have not stopped delivery of RME180, so scrubber fitted vessels can lift the bunkers in port Karachi and Bin Qasim. Therefore, HSFO availability is still smooth and our dedicated self-propelled barges are deployed for the purpose.

Currently, all our four barges are self-propelled, Orion II can load approx. 200mts LSMGO, Orion I can carry 200mts HSFO, Orion VII has a loading capacity of 400mts. Finally, Falcon can load 600mts with pumping rate of almost 130-150 mts / hour. Our plan to dedicate 1 barge for HSFO and 2 barges for VLSFO delivery once the product will be available.

Moreover, we also have arrangements with other chartered barges for when there is any additional requirement and need.

In terms of pricing, we are always competitive while offering best quality products every time no matter what the cost is.

We thank all our clients for trusting us and remaining part of the business as family. We assure you that Orion will keep improving and give you the best service and quality fuel at all times.

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Mundra is now India's top box port ©Felix Dance/CC-BY

TRADING PLACES

India's surge in Covid cases has taken a heavy toll and cast doubt over fuel demand, but other South Asian countries do have some reasons for optimism, John Rickards writes

The short-term future of India's bunker sector is likely to be heavily influenced by the impact of the country's crippling second Covid wave on cargo traffic, fuel demand and refining capacity - and on how long, and how far, state lockdowns go and whether the government imposes another national one.

In last year's national lockdown, crude refining in the country dropped by up to 35% as domestic fuel demand plummeted and international trade contracted. So far, though, despite horrendous mortality and case rates and the overwhelming of the country's health system, at the time of writing the government has resisted calling a full national lockdown. While various states across India have implemented their own lockdowns to one degree or another, at the time of writing Indian Oil Corp had only reduced production runs by 12-15%, though further cuts were possible as refining by-products were building up at some plants, while local reports suggested Bharat Petroleum Corp would be cutting crude imports for both May and June.

Prior to the surge in cases and the subsequent state lockdowns, there had been signs of recovery from the woes of last year. The Adani Group's ports arm, which operates a string of cargo hubs across India, saw cargo throughput rise across the 2020-21 fiscal year compared to the year before, even allowing for its acquisition of Krishnapatnam Port in October.

Across the year, the group's ports handled 247 million tonnes of cargo, up from 223 million, and with box traffic performing the best, up 16% on the year before. As well as buying the remaining stake in Krishnapatnam in April, the company also bought up Gangavaram Port in March of this year. Government-run ports saw their traffic drop 5.3% year on year, down to a three-year low, in the same period.

Adani said that it saw growth across the board. "While east coast ports grew by 42%, west coast ports grew by 3% outperforming the nearby major ports," the company said. "APSEZ handled [its] highest ever container volume of 7.2 million TEU during the year and achieved a market share of 41%, a gain of 5%. Mundra Port continues to be the largest container handling port in India and handled 5.66 million TEU which is almost nearly one million TEU more than JNPT."

"In FY21, ten new container services were added, four at Mundra and two each at Hazira, Kattupalli and Ennore, which will add 800,000 TEU per annum. Mundra port continues to be the largest commercial port in India, grew by 4% and handled a record cargo of 144 MMT, on the back of 18% growth in container volume. Given this performance, the gap between Mundra port and Kandla port, the second largest port has widened further. Mundra port is ahead by 23%."

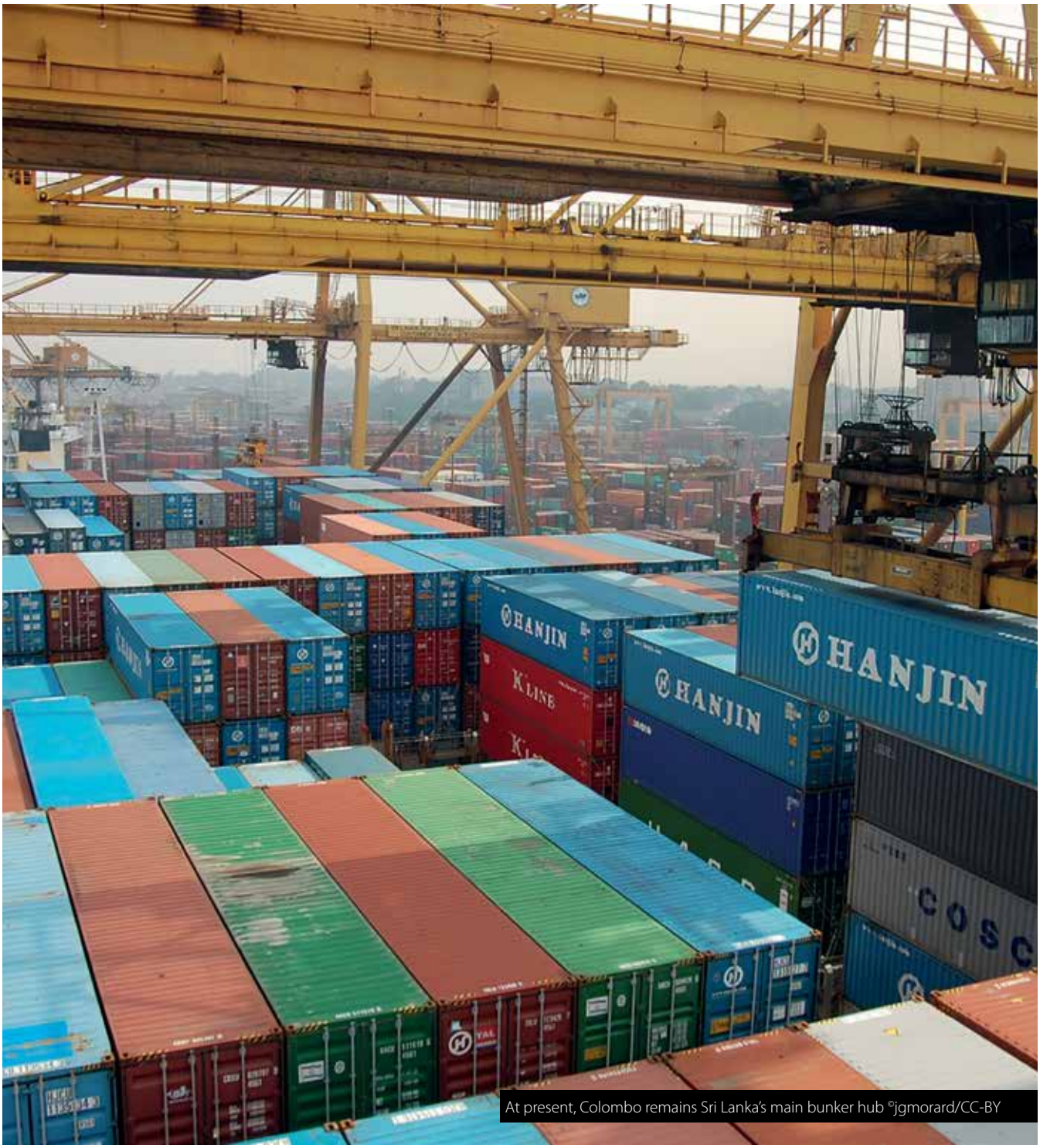
Adani Ports CEO Karan Adani said: "FY21 has been a transformational year for Adani Ports and Special Economic Zone Ltd (APSEZ). Some of the key decisions we took this year have set the foundation for the coming decade. Our customer centric approach has yielded good result for us as our market share increased by 4% on a pan-India basis. Mundra port, which is the largest commercial port in the country, this year has also become the largest container port in the country surpassing JNPT by a big leap. We have also been able to restructure our costs fundamentally and were able to demonstrate an increase in EBIDTA margin by 1%, taking our port margins to 70%. On the growth side we used this time to complete four large acquisitions i.e. Krishnapatnam port, Gangavaram port, Dighi port and Sarguja rail line, taking our total portfolio to 13 ports in the country. The total value of said investment was Rs.26,000 crore (US$3.6 billion). We have also been able to take another milestone step in our international journey by foraying into container terminal in Colombo port. With these steps we are truly in the right direction to take APSEZ from a port company to a transport utility company delivering full logistics solution to our customers."

There's been some overhaul of the country's bunker supply sector too. The Directorate General of Shipping issued warnings to 24 suppliers in December over failures to carry out required audits and 10 who failed to comply by March have had their bunkering licenses revoked.

New Mangalore Port Trust, meanwhile, has awarded a five-year bunker supply license to IOC, with minimum annual volumes of 90,000 tonnes.

"Based on the present policy of the Central Government, NMPT initiated action to identify infrastructure projects and found that the bunkering facilities for catering ocean going vessels and coastal vessels etc. if, established in this port will have enough potential since the port is located on the main trunk route," NMPT said. "Considering the strategic location of the port among the international sea routes, it is possible to provide bunkering services to ships within the port area connected to all berths and also those anchored outside the international waters."

"The objective was to provide the most appropriate facility from among the resources already available with the port to serve as a full-fledged bunkering facility, by incorporating the required modifications, to achieve the intended purpose."



At present, Colombo remains Sri Lanka's main bunker hub ©jgmorard/CC-BY



A second phase of development has been announced for Gwadar ©Gwadar Port Authority

PAKISTAN UPGRADES

Development of Gwadar Port continues as foreign investment supports key project

Like India, Karachi in Pakistan was under temporary lockdown at the time of going to press, although the port remained open. However, the upgrades to its port and trade connections under the China-Pakistan Economic Corridor program are continuing apace, with work imminent on the main connections through Balochistan to Gwadar Port. CPEC Authority chairman Asim Saleem Bajwa revealed in May that along with investment in the various SEZs along the route, there'd been sufficient foreign investment interest in Gwadar that the government was launching the second phase of the port's development, a 2,200-acre free trade zone, while the port infrastructure and handling capacity was continuing to grow and the government was setting up a focus group aimed at increasing vessel traffic to Gwadar. CPEC is not without its issues. - tThe Pakistani government is currently aiming to restructure US$3bn billion of debt it took on to Chinese energy firms as part of the project to provide a longer pay-back period and cut its tariffs. - but establishing Gwadar as a major trading port would be a considerable boost to the country's ship services sectors and ease some of the pressure on Karachi and neighbouring Port Qasim.

The latter has also seen recent investment focusing on LNG and its infrastructure.

Port Qasim Authority has inked a US$33.5 million deal for four LNG-powered tugs and two pilot boats from Turkey's Sanmar Shipyards. The move certainly bodes well for PQA's thoughts on the future availability of the fuel and bunkering ability at the port. At the same time, the country's Oil & Gas Regulatory Authority granted separate 15-year licences to Tabeer Energy and Energas to construct LNG terminals at Port Qasim for import, regasification, storage and supply. The licenses are subject to PQA agreement and the two companies putting FSRUs in place before terminal construction begins. They will also have to sign transportation agreements with two pipeline companies to supply gas inland; without these, the terminals would be unlikely to be commercially viable. The two terminals are hoped to be operational in two years and eighteen months respectively; Tabeer's terminal requires considerably more pipe work.

Sri Lankan bunkering resurgence

With the country now offering bunkering services at Hambantota and Trincomalee as well as Colombo there are grounds for optimism

Sri Lanka's bunker sector is also seeing signs of growth. In February, after nearly a year of waiting for lockdown measures to ease, bunkering finally restarted in Hambantota International Port (HIP). China's Sinopec, through a local subsidiary, has begun regular deliveries of both VLSFO and MGO to the port, with Lanka Marine Services acting as barge supplier via the MT Kumana. Her first delivery of 1,500 tonnes of VLSFO was made to a tanker en route from Chennai to the Suez Canal. Sinopec Fuel Oil Lanka has received BOI approval to trade wholesale, export, but also to supply bunkers directly via the HIP tank farm pipelines.

Tao Lyu, General Manager of SFOL, said: "We intend bringing cost-competitive low sulphur fuel to all local players who will in turn bring their global clients to Sri Lanka. We imported 25,000 tonnes of low sulphur fuel oil to HIP in April 2020, but the port could not begin bunkering operations because of the COVID-19 lockdowns. As operations are now reactivated, we are ready to supply and make mutually beneficial partnerships."

"This is a great opportunity for all Sri Lankan-licensed bunker suppliers who are involved in supplying bunkers for vessels calling at any port in Sri Lanka or plying the busy East-West shipping route. Through our partnership with Sinopec, one of the largest global players trading VLSFO, they are well positioned to give competitive prices to attract vessels. This is a new and dynamic change in the bunkering supply market in Sri Lanka. With Sinopec entering the local market as a wholesaler the doors are now open to tap into the economies of scale this global giant can provide. With the competitive prices they are offering, Sri Lanka can capture a larger regional market share of supplying bunkering for vessels, which will help all local players in this market to expand.

International trade is all about building synergies and creating opportunity, and this is a very good example of that," gushed HIPG COO Tissa Wickremasinghe.

After so many false dawns and such a troubled development process, if Hambantota can finally begin delivering on the genuine potential offered by its location, the results could be genuinely impressive; from HIPG's perspective it's no wonder that there's an air of celebration. Both HIPG and LMS were approached for comment regarding business since that first stem and the outlook for the rest of the year, but neither was willing to comment.

The port itself has continued to see cargo traffic - predominantly ro-ro vehicles for transshipment to the Middle East, South Africa and South America; Sri Lanka itself was under an import ban during lockdown - rising despite the pandemic, with volumes hitting an all-time high in December and January. The port also saw improved volumes of LPG and dry bulk cargo handling, taking their overall throughput figure to 1,788,995 tonnes, including those 388,031 units of ro-ro cargo. HIPG described it as "a noteworthy achievement in a rather tough year of lockdowns and restrictions and a considerable improvement from the figures of 2019".

With local IOC subsidiary Lanka Indian Oil Corporation offering VLSFO at Trincomalee and LMS and much of the other local bunker market still seeing steady trade at the main hub in Colombo, the government has reportedly endorsed a proposal for state-run Ceylon Petroleum Corporation to re-enter the bunker market directly for the first time in a decade and a half. CPC had pulled out of the sector when the market was opened up in 2004, though it still imports fuel oil and MGO. Energy Minister Udaya Gammanpila suggested that CPC's ability to import in bulk at comparatively low prices would enable competitive bunker supply principally, it seems, to the naval market, though the initial phase of its re-entry would reportedly be through providing fuel for smaller suppliers.

Bangladesh hit hard by Covid-19
Economic uncertainty affects bunker suppliers despite signs of recovery

Bangladesh Petroleum Corporation took its first shipment of VLSFO in late Q3 last year. Bangladesh's fragile economy has suffered in the pandemic, though there had been signs of exports recovering somewhat in the early part of 2021.

In May, the country's shipping ministry inaugurated a slew of new investments principally connected to the building of Payra Port and the dredging of much of the country's vast network of inland waterways.

Given the importance of river traffic to Bangladesh, expansion and investment in its operational capacity should be a welcome boost in the long term. However, with the country temporarily cutting all travel to and from neighbouring India in a bid to prevent a similar surge in Covid cases in Bangladesh and growth on course to miss government targets by some margin, the immediate outlook for the country's bunker suppliers looks uncertain.



MARKET BASED MEASURES AND CONTRACT LAW

Pressure is mounting to impose some sort of charge on global shipping aimed at promoting a shift towards zero carbon. Watson Farley & Williams (WFW) Tax Partners Daniel Pilarski (NYC) and Richard Stephens (London) examine the potential contractual implications for shipowners

The Marshall Islands and the Solomon Islands have proposed that IMO imposes a levy on carbon emissions by ships. The proposed levy would be imposed at a rate of US$100 per tonne of carbon dioxide emitted, and would come into effect by 2025, with a potential increased rate over time. Although other carbon tax proposals have been made in the past, the Marshall Islands and Solomon Islands proposal is notable in that it is a "country-led" carbon tax plan explicitly addressing shipping.

Why a carbon tax?

In the past few years, the global shipping industry has been focused on transitioning to a more environmentally conscious model of fuelling ships by reducing greenhouse gas emissions such as carbon dioxide, methane and nitrous oxide. As evidenced by WFW's Environmental, Social and Governance (ESG) Survey The Sustainability Imperative, reducing shipping's carbon footprint is a top priority for the maritime industry. This follows on from the Poseidon Principles, which established a global framework for assessing and disclosing greenhouse gas emissions by ships.

The Marshall Islands and the Solomon Islands are low-lying island nations, particularly vulnerable to the rising of the ocean caused by global warming, and therefore have a strong vested interest in moves to limit greenhouse gases. The Marshall Islands' participation is noteworthy, in that they are also home to the world's third-largest shipping registry.

While the solutions to the industry's decarbonisation challenges are widespread and varied, a common question emerges — "Who is going to pay the bill?" A carbon tax is one option.

How would a carbon tax work?

While the precise mechanics of a carbon tax remain uncertain, it is likely that each shipowner or other interested party would self-report the amount of carbon dioxide emissions by the relevant vessel over the relevant period, and the tax would be assessed on such reported amount. Reports could be made and taxes paid after each voyage, or after the last voyage in a given year or other time period. For voyages that straddle the end of the year (or other tax period), it would likely be impracticable to report on carbon emissions while the ship is in transit, although it is possible that the tax could be prorated to each period in such case. Issues such as monitoring, auditing, compliance and penalties for underpayment or failure to report remain to be addressed.

IMO would be charged with collecting and disbursing the tax. The Marshall Islands and Solomon Islands have suggested that at least 51% of the tax revenue raised go toward climate change adaptation and mitigation costs, with the remainder going towards decarbonisation research and development and administrative costs. How exactly the tax revenues would be disbursed will also remain to be seen.

It is also possible that the tax proposal could be tweaked in various ways. For example, the tax could be assessed not on all carbon emissions, but on all carbon emissions above a set standard, with a subsidy paid on ships whose emissions fall below the standard. The revenue effects could be made up by raising the rate of the tax above the target standard. Such a proposal would more sharply punish the worst polluting ships, while rewarding the cleanest. Taxes could also be imposed on other greenhouse gases, not just carbon.

Nevertheless, the Marshall Islands and Solomon Islands proposal has effectively set a benchmark (US$100 per tonne of carbon dioxide, implemented by the IMO, beginning in 2025) against which other proposals can be judged.

Contractual considerations

A key question for shipowners, charterers and other relevant parties will be who will be liable to pay the tax. It is not at all clear under the carbon tax proposal which party would be legally obliged to pay. For example, if a shipowner bareboat charters the ship to a demise owner, who time charters the ship to a charterer, there are at least three potential parties against whom the tax could be assessed. It is also possible that the various parties could be jointly and severally liable, in which case the IMO could collect from any of them.

While some charter agreements have clauses that seek to assign tax liabilities, some have no tax provisions, and others contain only a gross up clause for withholding taxes.

A key question for shipowners, charterers and other relevant parties will be who will be liable to pay the tax. It is arguable whether any new carbon tax would qualify as a 'tax' for contractual purposes, unless a deliberately wide definition is included in the contract. A 'tax' is traditionally defined as any mandatory contribution imposed by a governmental authority. It is not at all clear whether the IMO (which is a specialized agency of the United Nations) is a governmental authority for this purpose.

It is certainly possible that a standard tax provision in a charterparty could cover a future 'carbon tax',



but if the parties wish to reduce ambiguity, it may be helpful to make clear in the agreement that any carbon tax (whatever that may be) is borne by the agreed party. It may also be important to balance specific language with enough broad qualifiers to cover alternatives to the current proposals. For example, if the agreement refers only to a "carbon" tax, but the tax is assessed on other greenhouse gases, a party may argue on technical grounds that the agreement does not cover such other taxes.
These issues of expected but uncertain future rule changes have greater significance for long term contracts.

That the charges are intended to drive behavioural change means they must have the potential to change significantly the economics of a charter agreement, and so cost allocation is a key issue. Additional questions involve the timing of the tax. For example, assuming the charterer has agreed to be responsible for the tax, if the tax is levied only after the time charter has terminated, should the expected tax be collected as part of charterhire (with a potential rebate for over-collection), or should it be collected only once it is assessed? Another question is which party should collect any subsidy for beating target emissions (if there is one).

Conclusion

The proposal by the Marshall Islands and Solomon Islands is potentially groundbreaking in its attempt to tax greenhouse gas emissions by the shipping industry. Although much uncertainty remains regarding the rollout of the tax, parties should consider carefully their current and future contracts to determine how a potential carbon tax may be dealt with.

UK Defence Club launches guidance on shipping's green transition

While the shipping industry would prefer any 'carbon tax' to be in the form of a levy, as proposed by the Marshall Islands and Solomon Islands, the EU is pushing strongly for an emissions trading scheme (ETS). The possibility that shipping may have to accept an ETS is covered by The Green Transition. This new report, outlining the practical and contractual challenges facing the shipping industry on its journey towards becoming carbon neutral, has been published by marine legal costs insurer and services provider UK Defence Club.

Broken down into distinct themes, the report surveys the current landscape and addresses what the IMO's ambitious emission reduction targets, and other sustainable regulation, really mean for shipowners and operators.

The various stages of regulatory change are mapped out. The impact of the EU ETS on ship operators is explored, from negotiating fixtures and commercial considerations to the costs of permits, liability and potential disputes.

The report emphasises its conclusion that innovative, energy-saving technology will be the solution underpinning the IMO framework. In this increasingly complex environment, vessels will likely have to be retrofitted, while technological advancements will trigger improved operational efficiency and manufacturing methods, offering both huge opportunity and demands to those within the shipping industry.

The UK Defence Club's CEO Daniel Evans, CEO said: "There is a wind of change in our industry, placing climate crisis and sustainability at the forefront of the agenda. After bringing in progressive regulation to cut high sulphur fuel in 2020, the IMO has mapped out an ambitious development pathway towards a carbon neutral shipping sector. The Green Transition report will help our members and the wider maritime industry to get to grips with some of these issues. It's vitally important to plan and be prepared for future disruption that sustainability measures will bring, as well as being engaged and informed on the most prominent issue that will shape the future of our industry."

2021 AND BEYOND

Tanger Med has established itself as a global maritime and logistics hub, with a strategic location at the crossroads of major routes for the largest global maritime alliances

Tanger Med has positioned itself since its beginning as a major transshipment platform for intercontinental trade to and from Africa, which represent nearly 40% of the container traffic handled, and major maritime players such as Maersk and CMA-CGM, major logistics players such as DHL, CEVA Logistics, Nippon Express and Decathlon and major industrial players such as Varroc, Hands Corporation, SIEMENS, Valeo and Magneti Marelli are located in the industrial-port complex, which is now the number one container port in the Mediterranean.

The port project was born from a royal vision to build a port, logistics and industrial hub of international scale in the Strait of Gibraltar. Tanger Med has established itself as a global maritime and logistics hub, with a strategic location at the crossroads of major routes for the largest global maritime alliances.

In 2020, Tanger Med handled a total of 5,771,221 TEU containers making its the first container port in the Mediterranean.

Tanger Med maintains partnerships with its port partners, joining the initiative of the Port of Singapore in May 2020 to guarantee the continuity of global logistics chains during the epidemic, maintains a close collaboration with the region's ports and has an agreement with the port of Hamburg dealing with operational and technical ideas exchange.

The port is the number one export platform for Morocco. It saw over 350,000 trucks in 2020, mainly driven by agribusiness products. The port has 19 hectares of dedicated export infrastructure, able to process more than 2,100 units per day with a transit time of 2 hours through digitised processing. Exports are expected to grow to 600,000 units by 2025.

Digitisation is one of its major strategic development axes and the Port Community System is designed to improve administrative and operational efficiency. Digital services include ship call management including ship movement and slot reservation, import and export paperwork and flow regulation including digitization of the export procedures of agribusiness, e-payment and operations to and from the hinterland.

Recently, Tanger Med has partnered with Wärtsilä to co-develop modern Smart Port tools for port operations and digitalisation – including a new cutting-edge Port Management Information System (PMIS), implementing Just-In-Time (JIT) solutions, machine learning and AI as well as other innovative solutions.

Passenger traffic was obviously much reduced by Covid. Activity was suspended in March 2020 due to the closure of borders as a result of the health crisis.



Traffic resumed slightly in June 2020 in strict compliance with health measures; 701,599 passengers travelled through Tanger Med port in 2020, in decrease of 75% compared to 2019.

Vaccination campaigns have started around the world and in Morocco. As soon as the competent national authorities decide to allow the resumption of travel, traffic will resume according to existing rotations and maritime connections.

In bunkering, its location at the meeting point of the Mediterranean and the Atlantic provides direct access to the major East-West routes with "zero deviation".

Tanger-Med's tank farm and fuel terminal is designed in accordance with international standards, operated under concession by HTTSA. The tank farm has 532,000 m^3 capacity, much of it dedicated to marine fuels to serve bunker demand in the port complex and the Strait.

Three oil jetties for tankers and bunker barges are available for transshipment, import of product and bunkering activities. One of the jetties is specifically dedicated to barges.

The terminal is functional on a 24/7 basis to deliver multiple grades of bunkers, VLSFO, LSFO, IFO380, and MGO. Tanger Med and its partners HTTSA and Minerva Bunkering have been able to offer IMO 2020 compliant fuel since day 1 without any interruption.

Over 80% of the bunker supply from Tanger Med to the Strait of Gibraltar is performed in two anchorage areas by seven barges of 6500 MT capacity each. Tanger Med East and Tanger Med West are emerging as a major bunkering hub for global ships passing through the Strait of Gibraltar. As they are offering up to 16 anchorage points Adequate sea ground for anchorage, good meteorological and sea conditions and low congestion

The commitment of the Port Authority of Tanger Med to develop the anchorage areas for bunkering is strong and are implementing a full range of services that any ships need when stopping for bunkers, crew change, ship chandelling, spare parts transportation.

Looking ahead to 2021, Tanger Med will continue as a worldwide and regional port platform. As the leading container port in the Mediterranean, Tanger Med will pursue its productivity and competitiveness objectives and aims to enter the worldwide top 20 in the coming years. At the same time, it will continue to develop as a major logistics hub through the consolidation of export logistics corridors, and on its industrial side (a site of over 2000 hectares, with 85,000 jobs and 1,100 companies), Tanger Med will continue to attract new foreign investment.





SEVEN ENERGY

Seven Energy is a Free Zone Company and a Limited Liability Company registered in United Arab Emirates affiliated to a group of companies based in the Sultanate of Oman

Dedicated to providing complete service support in commodities trading and distribution, manufacturing/ blending, and shipping operations.

Established in 2016, the founding members have vast experience within the industry. The team at Seven Energy is composed of various professionals with extensive experience in the oil & gas related and other commodities, business development, trading and operations. The extensive skills and experiences of the team in trading, distribution, blending and shipping operations are the key reasons for the company's rapid and stable success.

In a very short time, Seven Energy has developed multi-million supply and purchase contracts to various end-users and producers. The company's scope of activities includes now:

- Petroleum Products and Petrochemical Trading
- Supply and Distribution of petroleum products and petrochemical products to end users
- Gas and Liquid Bulk Terminaling
- Bunker Cargo Supply
- Tanker chartering (TC and Spot)
- Non-Ferrous Metal Trading (including precious metals)
- Limestone, Cement, and other construction materials trading
- Manufacturing/Blending

Seven Energy incubates companies through unparalleled passion that transforms the mundane into extraordinary. The entities replicate this pedigree of excellence, buoyed by uniquely gifted individuals committed to making a positive impact on their environment.

At Seven Energy, we are driven by the Company's strong philosophy and culture which inspire us to create more value for all stakeholders.

Our philosophy steers each journey to new frontiers from within, as Seven Energy continues to seek cleaner, creative and sustainable ways of being the provider of choice wherever energy is consumed.

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AMA RESEARCH & DEVELOPMENT

AMA Research & Development (S) Pte. Ltd.

Our laboratory in Singapore is fully accredited with ISO/IEC 17025:2017 by the Singapore Accreditation Council for the analysis of marine residual fuel and marine distillate fuel oil

Our laboratory in Singapore is fully accredited with ISO/IEC 17025:2017 by the Singapore Accreditation Council for the analysis of marine residual fuel and marine distillate fuel oil.

Our laboratory is fully equipped to test bunker samples in accordance with the requirements of ISO 8217/2005, ISO 8217/2010, and ISO 8217/2017, and this therefore meets the needs of most vessels. It is staffed by highly experienced laboratory technicians, manager and scientists, and is capable of testing large volumes of samples as well as individual samples for dispute resolution.

Marine fuels are complex mixtures of various organic and inorganic components. Their quality and performance greatly depend on the composition of the fuel blend, and occasionally unsuitable components may be introduced along the supply chain. Poor quality, contaminated, or off-specification bunker fuel can cause problems with the ship's main and auxiliary machinery where operational difficulties or even damages may result.

Off-spec fuel could also lead to problems with PSC, and not only with respect to sulphur content. It is understood that the California Air Resources Board may start testing samples of distillate fuel for compliance with the carbon residue levels of ISO8217, specifically, they will use ISO10370, an analysis standard for which we are accredited.

AMRAD provides a comprehensive approach for the investigation of fuel quality disputes using a range of additional tests to cover a wider scope beyond ISO 8217 parameters including:

- Stability / Compatibility by Spot Test
- Asphaltene Content
- Xylene Equivalence
- Toluene Insolubles / FTIR
- Fatty Acid Methyl Ester (FAME) by FTIR
- Analysis of Sludge/Residue/Debris samples by combining various analytical techniques

This brings a new dimension to the resolution of bunker fuel oil disputes, and AMRAD provide an unrivalled combination of in-house testing, as well as scientific and engineering expertise.

When disputes arise AMRAD will be pleased to host the interested parties to witness the opening of samples as well as the full testing procedure when so required.

AMRAD also provides in-house training to interested parties including ship owners, charterers, brokers, insurers, and other experts wishing to broaden their knowledge of fuel oil testing.

For more information, please contact us at:
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FUJAIRAH NATIONAL GROUP (FNG)

Fujairah National Group (FNG) is one of the leading, diversified business entities located in the Emirates of Fujairah, on the East Cost of United Arab Emirates

الخليج لتوزيع البترول
GULF PETROL SUPPLIES
BUNKERS

Structured into Eight operational divisions - Construction, Real Estate, Healthcare, Education, Oil Storage, Aviation, Trading, Services and Hotels. The group maintains a decentralized approach, giving individual businesses flexibility and versatility to maintain a competitive stance which benefits employees, providing a clearly defined work culture wherein individuals are empowered with authority and responsibility for their work. The success of FNG is attributed to the proactively managing changes, whilst upholding the values of integrity, excellence, and social responsibility.

Entrepreneurship and rigorous customer focus has enabled the FNG Group to grow its business by responding to the ever changing needs of the customers and societies in which it operates. We are committed to offer customers, an unrivalled choice of product and services with exceptional standards.

Gulf Petrol Supplies LLC is 100% owned by FNG, which is owned by Fujairah Ruling family members and is part of a larger entity. Within a short span of time, GPS Bunkers has established its reputation as a service-oriented company, with a broad knowledge of the bunkering business, particularly in the ports of UAE along with Indian Sub-continent, Sri Lankan Ports and across an array of Global ports.

Our specialized knowledge of physical bunker trading along with B2B business, gives us an edge to dedicate our attention in building and maintaining solid relationship with our customers and through these collective efforts, we consistently endeavor to create value for our customers, driving the chain of conducive relationship with them.

We operate and function in one of the busiest ports of the world as a physical distributor, as well as a reseller of global marine fuel, with a strong base in Fujairah, always guaranteeing high quality products and elite services. Along with handling of bunkering and cargo trading of fuel oil & marine gasoil in the port of Fujairah, Khorfakkan & Kalba, we also cater to onshore gasoil retailing. GPS has its owned and controlled infrastructure, which includes oil storage facilities and fleet of barges, which provide an edge over any other market players. These core competencies along with our commitment to excellence, provides us a very strong foundation for delivering immaculate services and support for all our customers across the regions.

These services of ours are backed by years of expertise and knowledge in these areas. Endeavoring always to provide the utmost professional and economical solutions for meeting marine fuel needs, along with the best local knowledge efficiently.

Gulf Petrol Supplies also holds a 60% stake in GPS Chemoil Storage Facility, a joint venture between Gulf Petrol Supplies and Glencore in Fujairah. With a total capacity of 700,000 CBM the GPS terminal provides storage facilities for the whole range of petroleum products. This Oil Terminal is a state-of-the-art terminal, with topmost advanced technologies, wherein the tanks are equipped with heating systems, blending facility with ejector nozzles and can handle all qualities of Fuel Oil. GPS recognizes and has always embraced the importance of taking the long view. Our business model, strategies and growth plans are driven by a clear vision of the role we aspire to play in creating energy for a better world.



GTT (GAZTRANSPORT & TECHNIGAZ)

GTT (Gaztransport & Technigaz) is a technology and engineering company which designs cryogenic membrane containment systems, dedicated to the transport and storage of liquefied gases, in particular LNG (Liquefied Natural Gas)

For over 50 years, GTT has been designing and providing cutting-edge technologies for an improved energy performance, which combine operational efficiency and safety, to equip LNG carriers, floating terminals, land storage, and multi-gas carriers. GTT has built trusting relationships and lasting partnerships with the different stakeholders (shipyards, ship-owners, oil & gas companies, terminal operators and classification societies). The company provides them with established, reliable and efficient technologies, promoting storage space optimisation as well as a reduction in construction and operation costs of ships and tanks. GTT helps its customers define their requirements before translating them into membrane-based solutions for multi-gas and LNG transport, as well as onshore and offshore storage (FSRUs and FLNGs).

New markets

Always striving to meet future requirements, GTT anticipated the shift towards greener shipping, notably with the introduction of the Global Sulphur Cap, enforced since January 1st 2020 with the reduced limit for SOx emissions for shipping from 3.50% to 0.50% today. To address this challenge, the company has expanded its offer for this new and promising market, providing customised technological solutions and engineering services for LNG fuelled vessels as well as the associated LNG bunkering infrastructure. GTT develops innovative solutions to ease bunkering operations and to optimise the LNG volume and the space occupied, resulting in a minimum loss of cargo capacity. The company offers highly competitive storage and handling solutions, which cover the whole logistic chain, from the LNG liquefaction terminal in a producer country to the tank of an LNG-fuelled ship. LNG as fuel offers a viable solution for this energy transition.



LNG propulsion has been used successfully on LNG carriers for many years. It reduces significantly the emission of SOx, NOx and CO_2.

The Group is also active in hydrogen through its subsidiary Elogen, which designs and assembles electrolysers notably for the production of green hydrogen.

Services

GTT and its subsidiaries have also developed a broader range of services, to better support its customers and partners, focusing on operational issues, for the entire lifetime of the vessel, including training services, assistance and operation support, consultancy services & engineering studies, membrane tanks maintenance services... As shipping is turning digital, GTT Group proposes Smart Shipping Solutions, combining its experiences and skills to offer a wide range of digital services to the maritime industry.

Applications

GTT provides bespoke solutions for different segments (LNG as fuel):

- very large container ships (VLCS)
- cruise ships
- tankers
- bulk carriers

Support

GTT offers its customers a wide range of services, at each stage of the liquefied gas chain:

- consultancy
- training
- maintenance assistance
- technical studies
- simulation software
- artificial intelligence

Advantages

GTT's proven membrane containment systems offer several distinctive advantages:

- optimisation of cargo storage space
- reduced vessel construction and operation costs
- modular design allowing for flexible assembly in vessels of all sizes without significant capital expenditures.

Shape

GTT is listed on Euronext Paris, Compartment A (ISIN FR0011726835 Euronext Paris: GTT) and is notably included in SBF 120 and MSCI Small Cap indices.

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GTT
Technology for a Sustainable World

MARINE LNG FORUM

Global shipping audience hears latest insights at the Marine LNG Forum, hosted by TotalEnergies

Delegates at the inaugural Marine LNG Forum hosted by TotalEnergies have heard the latest insights powering the global LNG bunkering market, and the challenges and opportunities the shipping industry is likely to face as it progresses towards decarbonisation.

Held on 28th April, the event brought together industry experts from across the marine fuels, engine manufacturing, vessel chartering and operating, lubrication and certification sectors, including:

- AET: Capt. Amit Pal, Global Director, Dynamic Positioning Shuttle Tankers (DPST)
- Bureau Veritas: Carlos Guerrero, Global Technology Leader, LNG Carriers, Tankers & LNGBVs
- Lubmarine: Nikolaos Kotakis, Technical Director
- TotalEnergies Marine Fuels: Jesper Rosenkrans, Global Sales & Business Development Director and Mireille Franco, HSEQ & Technical Director
- TotalEnergies Trading Shipping: Sébastien Roche, General Manager Technical Department
- WinGD: Volkmar Galke, Executive Management Sales

Hosted by TotalEnergies, delegates discovered the latest developments and initiatives that are underway in 2021 to help shipping companies navigate the industry's energy transition.

Speakers highlighted the key role LNG has to play in supporting the International Maritime Organisation's (IMO) decarbonisation targets, and collectively agreed that taking a wait-and-see approach is not a strategy. If the IMO targets are to be met, the shipping industry needs to act now and LNG is part of the solution.

Jesper Rosenkrans, Global Sales & Business Development Director at TotalEnergies Marine Fuels, said: *"LNG represents an available and competitive fuel solution, and a viable pathway to greener bio-LNG, which collectively contribute to the IMO's long-term strategy of reducing greenhouse gas emissions from ships. Through this Forum, we not only demonstrated why LNG offers a compelling combination of applicability, environmental benefits, and commercial sense, but also how shipping companies can make the switch to cleaner LNG marine fuel."*

Key discussions at the Forum looked at how:

- LNG is the cleanest marine fuel solution available at scale today, to help reduce shipping industry emissions.
- LNG provides a practical pathway for the development of future marine fuels including Biomethane and Ammonia.
- LNG can lead to a net emission reduction even after factoring in methane slip risk. A Sphera study, cited during the event, showed that a 15-23% reduction in greenhouse gas emissions when using LNG to power two-stroke ship engines is achievable net of methane slip.

Looking on the horizon to 2050, shipping has set its course for decarbonisation with the ultimate goal of delivering at least 50% reduction in total annual greenhouse gas emissions compared with 2008. Rising to this challenge requires collaboration and cooperation right across all sectors of the industry.

Serge Dal Farra, Global Marketing Manager at Lubmarine, says: *"We created this Forum to enable the shipping community to engage in an in-depth and extensive discussion. With over 500 delegates signing up for the forum, we were extremely grateful to all our panels experts who were able to share exactly where we are in terms of global LNG developments today, and how those developments are already creating the foundations for the successful delivery and implementation of alternative fuels tomorrow."*

Rosenkrans added: *"The strongest message from across the panel was that if the IMO targets are to be met, there is no 'either LNG or alternative fuels scenario'. We must grasp the benefits of LNG today. Forgoing the opportunity to cut carbon emissions for the years ahead by not switching to LNG, while waiting for future fuels to be commercialised, isn't an option. As a broad energy company, TotalEnergies is committed to the energy transition and we firmly believe, LNG is part of that energy basket today and will be in the future."*

Visit https://go.totallubmarine.com/total-marine-lng-forum-2021 or scan this QR code to download the key speaker presentation, panel discussion and Q+A session.

www.totalenergies.com

TotalEnergies



DIARY

22 JUNE 2021
IBIA WEBINAR: Bunkering Innovation: Digitalisation and its Legal Landscape, ONLINE

Asia will host its first webinar sponsored by Bunkerchain Pte Ltd and Helmsman LLC. Gabian Chew, Editor of Manifold times will moderate this session, which will include discussions regarding digitalisation in the bunkering experience, trials, and outcomes. The webinar will also cover the legal aspects of Blockchain pertaining to bunker delivery. This webinar will be open to all IBIA members and non-members, free of charge.

For more information: www.ibia.net

25 - 26 JUNE 2021
V Russian Forum, SAINT PETERSBURG, RUSSIA

This annual event organised by the Russian Association of Marine and River Bunker Suppliers will look at "Current State and prospects for Development of Russian Bunker Services Market". This is the main discussion forum where industry professionals can talk about the most important problems and find decisions by common efforts in Russia. The Association is the only official representative of Russian bunker industry and is supported by several large globally recognised companies. It is expected that around 150 delegates will participate in the Forum, including almost all the main players influential in the bunkering industry, as well as top managers of related industries.

For more information: https://mrbunker.ru/forum

1 - 3 SEPTEMBER 2021
IBIA Conference Series 2021
Bunkering & Shipping in Transition Part 2, Americas

Join the International Bunker Industry Association ONLINE for the second session of a two-part conference series in 2021 to gain first-hand insights and understand the challenges and successes in the bunkering and shipping sectors. The Conference will bring together the global bunkering and shipping industry for networking, create a platform for engagement with industry and government, and shared learning.

For more information: www.ibia.net

13 - 17 SEPTEMBER 2021
London International Shipping Week
LONDON, UNITED KINGDOM

LISW21 will be the 'must attend' event of 2021, offering up to 250 industry functions and unique networking opportunities for leaders across all sectors of the international shipping industry – regulators, charterers, ship owners, ship managers, bunker suppliers, lawyers, ship brokers, bankers, insurers, insurance brokers, commodity traders and brokers, ship suppliers, port operators, shipping service providers and many more.

For more information:
https://londoninternationalshippingweek.com/

27 - 30 SEPTEMBER 2021
Seatrade Cruise Global MIAMI, USA

13,000+ cruise professionals get together each year at Seatrade Cruise Global because they know if they are not here, they sacrifice huge growth opportunities. Seatrade Cruise Global is your chance to expand both your knowledge base and your entire network in a forum like nowhere else.

For more information:
https://www.seatradecruiseglobal.com/en/home.html

22 - 24 OCTOBER 2021
41st International Bunker Conference IBC
OSLO, NORWAY

The International Bunker Conference (IBC) has become a world-renowned forum for the international bunker industry. The previous IBCs have focused on the industry milestones and challenges presented by MARPOL Annex VI. Challenges, consequences and opportunities approaching new regulations in the bunker industry. We have passed the doorsteps of a paradigm shift in bunker fuels as we know it. Did we manage and succeed?

IBC 2021 will summarize 2020, provide market overviews and solutions in the new regulatory regime, and ask whether the real storm is brewing on the horizon. Don't miss the chance to obtain an update on what's happening in the bunker industry as well as to meet old and new friends at this great networking arena.

For more information: https://www.bunkerconference.com/

26 - 28 OCTOBER 2021
Maritime Week AMERICAS, PANAMA

Maritime Week Americas 2021 returns to Panama with a week of key maritime events, including the MWA Conference plus top-level training and other specialist training. MWA remains the largest and most popular bunkering conference in the Americas.

For more information:
https://www.petrospot.com/events/mwa2021-panama

2 - 4 NOVEMBER 2021
IBIA Annual Convention 2021, ONLINE

The IBIA Annual Convention is the Association's flagship conference. Every year IBIA conducts the most anticipated conference in the industry. This year will gather top leaders from across the world to spark dialogue, share insights, and transform conversation into action. IBIA will arrange a dynamic series of sessions around diverse topics, which will cover a broad spectrum of issues, with a specific emphasis on the future challenges facing the Bunker and Shipping Industry.

For more information: www.ibiaconvention.com

8 - 12 NOVEMBER 2021
Martime Week GIBRALTAR, GIBRALTAR

Maritime Week Gibraltar is a major biennial event designed to showcase and promote Gibraltar's thriving maritime sector to a wider international audience.

Strategically located at the crossroads of the Mediterranean and Atlantic and of Europe and Africa, Gibraltar is the most important bunkering hub in the Mediterranean but also provides a range of key maritime services, from ship repair and agency to hull cleaning and surveying, from major cruise destination to superyacht haven, from thriving financial and legal centre to preferred crew change location. Through a range of events, including a Flagship Conference, training courses, seminars, B-2-B meetings, technical site visits, an exhibition and some spectacular networking, Maritime Week Gibraltar will demonstrate the advantages that make Gibraltar the rock-solid partner for global shipping.

For more information: https://www.petrospot.com/events/MWG2021

All dates are correct at time of going to print and are subject to change, please review the related websites

WORLD BUNKERING

Q3 2021... NOW OPEN FOR BOOKINGS

Q3 2021

SPECIAL FEATURES:

Independents

As shipping starts to recover from Covid-19 what are the prospects for the independents? How will they adjust to an increasing complex marine fuel scene?

Carbon Capture

Recent months have seen a number of new developments in the field of carbon capture. We take a look at what this could mean for the shipping industry and ask if it could be part of shipping's move to zero carbon.

Fuel Quality

Some 18 months after the implementation of the IMO 2020 0.50% sulphur limit, we look at the quality issues that have arisen. We review progress on developing specifications that are relevant in a market where the properties of IMO 2020compliant fuel vary greatly.

GEOGRAPHICAL FOCUS:

Far East

This wide-ranging survey of East and South East Asia examines how the region has coped with Covid-19 and is looking at a future where alternative fuels are starting to emerge. Singapore retained its position as the top global bunkering hub in 2020, but we also report on developments around the region, from China to Indonesia.

Regular Features

Russian Update
News, Views, Analysis
Interview, Industry News, Environment,
Testing, LNG, Lubricants, Innovation, Legal News,
Equipment and Services, Diary
Event Previews & Reviews



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At Vivo Energy, our values are Honesty, Integrity and Respect

- At Vivo Energy, we believe in supplying high quality products under the safest conditions. All our products (LSFO 380cSt, LSFO 180cSt and MGO) are recertified upon receipt by a world class laboratory, in strict compliance with ISO 8217/2017 and Marpol 73/78 Annex.
- We leverage on our strong 70 years' experience of bunkering in Port Louis to provide the best service to our customers. We deliver fuels 24/7 via our extensive pipeline network at quay and by our dedicated barge at anchorage.
- Our barge goes through the Ship Inspection Report (SIRE) Programme every 6 months to ensure it meets the stringent OCIMF criteria in terms of safety and operations.
- We are the exclusive supplier of Shell Marine Lubricants in Mauritius. and have introduced lubricants grades compatible with the new LSFO since Q4 2019.

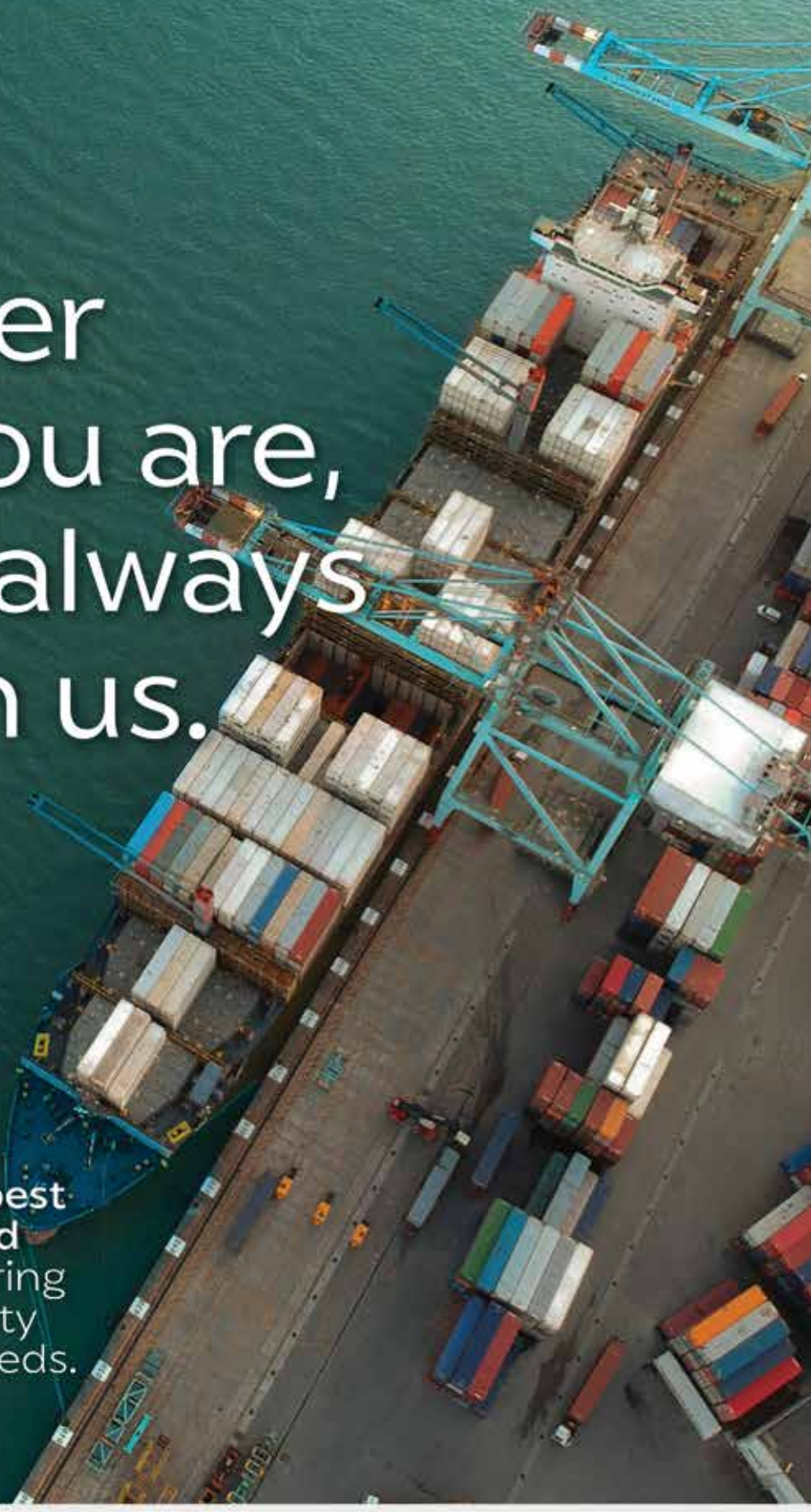
Contact our dedicated bunker desk for all your Port Louis enquiries

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