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PROFILE

Geoff Dalgleish, SAL Qld State secretary

WINE GROWS BULKIER

ENCOUNTER BAY ANNIVERSARY

Knox-Johnson vanquished – Montissier avenged

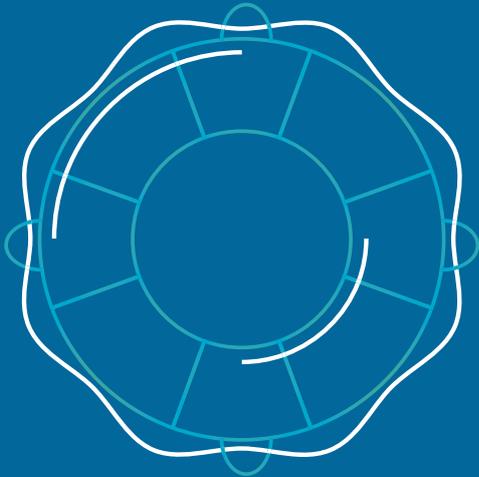
Burden of proof changes for cargo litigation

AUTUMN/WINTER 2019



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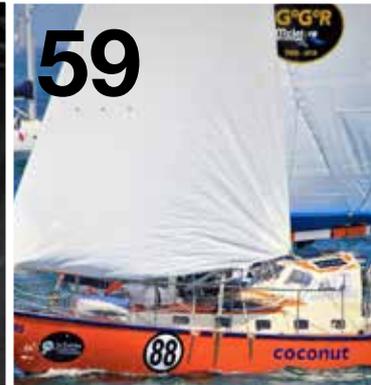
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Front Cover:
Spectacular fireworks coinciding with MSC Australia's 30 year celebration cruise on Sydney harbour
See page 4



Too many “B” words in the last six months

By ROD NAIRN AM, CEO, Shipping Australia Limited

It's been an action packed first half of this year. Of course, there has been a focus on highlighting freight, logistics, shipping and trade policies ahead of State and Federal elections but preparing for IMO 2020 sulphur limits, the proposed **biosecurity levy**, impacts of **brown marmorated stink bugs** (BMSB) and consideration of **biofouling regulation** have certainly focussed our attention.

Congratulations to Prime Minister Scott Morrison on the successful re-election of the Coalition. From the share market bounce and initial upturn in economic indicators it is clear that this result was generally welcomed by the business communities. Shipping Australia is keen to work with the Government to make improvements to shipping policy that will benefit all Australians. One of these is of course, resolving the impasse that would allow international container vessels to

carry domestic cargo, incidental to their international voyage. Such a simple change would unlock domestic markets to Australian manufacturers, help our primary producers to sell their produce to domestic markets and of course, reduce our greenhouse gas emissions and reduce unnecessary road deaths by moving long-haul interstate containers by ship, rather than by truck.

During the election campaign I was pleased to attend the **Mr Albanese's Labor shipping policy launch** and had the opportunity to ask whether, if elected, he would consider a Ministerial exemption for container vessels similar to that he had granted back in 2012 for large cruise ships. I noted the impressive growth that this had enabled in the cruise industry since. Pleasingly, Mr Albanese indicated that he was willing to consider all the factors, so perhaps there is room for some compromise ahead. While I would be the first to celebrate to see more Australian flag vessels plying international routes, I do have difficulty in accepting the economics until we have reduced the crewing costs through automation, or semi-automation at least.

A key policy plank that Mr Albanese announced was the **“Strategic fleet”**. In my 38 years in Navy, the last six in the senior leadership group, there was never a requirement identified for an Australian flag merchant fleet to support our strategic maritime interests. Our Navy's operational needs for merchant ship support have been consistently met by leasing vessels on the global market. Leasing the HMAS *Jervis Bay* and putting her under the white ensign

for support in East Timor was one example. And on the question of fuel security, I am a firm believer that our fuel security is best met by establishing a greater level of onshore strategic fuel reserves and ensuring that we maintain a geographically diverse variety of overseas fuel suppliers, along with utilising a wide range of different carriers from various flags. To give another perspective on this important matter, on page 42, we have included an article for the Australia Strategic Policy Institute on the question of “does Australia need a strategic fleet?”

For the past six months Shipping Australia, and I'm sure that a lot of other peak body representatives from the logistics sector, feel like we have been working for the Department of Agriculture. The proposed **biosecurity levy** implementation has caused a lot of resentment and, as we go to print, Minister Littleproud's committee of industry experts are putting the final touches on a report which we hope will clarify the circumstance and ease the dissent to some extent. A more detailed discussion of the proposed biosecurity levy is on page 30

For the shipping and the import industries especially, **brown marmorated stink bugs** have been causing headaches by adding delays and costs. Opening of treated containers became delayed by lack of suitable gas-free testing equipment and on-shore treatment of containers has suffered a backlog as demand exceeds the capacity of approved fumigation facilities. Some containers have been held up for more than a month, and LCL consignments have been particularly difficult to manage.



Tangalooma EcoMarines is a non-profit, Brisbane-based organisation committed to the protection of local marine and wildlife, and proud associate custodians of Quandamooka Country.

At the EcoMarines Ambassador Training Day on Friday 3 May, the EcoMarines student ambassadors made this wonderful sign (on recycled corflute they already had) to thank SAL for our donation of \$8,000 raised from the 2018 Shipping Australia Queensland Ball. We were thrilled to receive this acknowledgement and would like to pass on our thanks to everyone who supported this wonderful event.

The RoRo sector has been even harder hit. A new protocol was introduced by the Department of Agriculture in February, which mandated seasonal pest inspections for every RoRo vessel that has called at a high-risk country. Complicated by limited availability of inspectors and entomologists, the initial impact was a 12-hour delay, but uncertainty with clearances and re-inspections played havoc with advance booking for labour gangs and vessel schedules. The cost impacts have been horrendous, with costs of around \$100,000 not uncommon when additional fogging is ordered on vessels deemed high risk.

The stresses of BMSB led the Inspector General of Biosecurity, Dr Helen Scott-Orr being tasked to report into its management. Her report released on 28 May found that the measures appear to have prevented an incursion and,

“The BMSB response in 2018–19 stretched Australia’s border biosecurity system close to breaking point and had severe impacts on sections of the shipping and importing industries. Delays and extra costs in cargo-ship unloading and cargo release from biosecurity control were significant but unavoidable during the implementation of a complex array of measures to deal with the large numbers of arriving BMSB.”

The full report is available on the Inspector General’s web site www.igb.gov.au

The outlook for BMSB next season is potentially much worse, with the list of high-risk countries being expanded three-fold. So, since April there have been multiple rounds of engagement between DAWR and the various sectors aimed at finalising protocols for next season, by the beginning of June. A number of new initiatives have been mooted such as: early reporting of cargo treatments to streamline risk assessments, safeguard pathways, and a voluntary scheme for vessels to undertake precautionary measures to

reduce their risk profiles in order to avoid the compulsory seasonal pest inspection. Shipping lines have expressed concern that the introduction of safeguard pathways needs to be strictly assessed, as the failure of one pathway could cross contaminate all other pre-treated cargo carried on a vessel and invariably transfers the risk from the manufacturer to the carrier.

After the introduction of ballast water treatment systems and negotiating the transition to low sulphur fuel by the end of this year, **biofouling is likely to be the next big thing** to impact the shipping industry. The IMO has published a biofouling guidance document, last year New Zealand introduced stringent limitations on ships to only have slime layer on their hulls, and California has introduced biofouling regulation. Now Australia is heading down this path and has produced a biofouling regulation RIS.

Shipping Australia recognises the need for vessels to responsibly manage their biofouling. In order to enable this, it is necessary that Australia develop and **implement a national standard for in-water cleaning and a practical and effective process of gaining approval to conduct in-water cleaning**, and to have these in place before or concurrently with the introduction of the proposed Biofouling Management Regulation. In-water cleaning is already in demand but the Australian regulatory approval processes are mostly unworkable or non-existent.

Another container explosion and fire, this time on a ship alongside in Laem Chabang, Thailand on 25 May, has seriously injured at least 60 people, many more have been hospitalised. Immediately, my mind runs to undeclared or mis-declared dangerous goods, but we will have to await the investigation to confirm the actual cause. Mis-declared cargo is an ongoing problem in the container industry and is complicit in incidents like explosions and fires in the

Letter to the editor

Dear Editor,

“I have been reading Shipping Australia and I’d like to comment the IMO’s 2020 [sulphur cap and beyond] page 30 [Shipping Australia – Spring Summer 2018].

I would like to challenge Mr M Noronha on the fact that we already face challenges in Australia in obtaining the fuels that are compliant with 2010 specs, suffice that they cost \$100 more per tonne versus Rotterdam, and so can we envisage the challenges which are likely to arise in 2020.

According to the industry we are going to be 1million barrels short of IMO 2020 compliant fuel globally in 2020. We have no real visibility as to where in the world that shortage will manifest itself or where in the world there will be a surplus if any.

I am therefore interested to know how Australia can give any assurance that compliant fuels will be available owing that 100 per cent of their requirements is imported?

As a shipping line offering a direct service via Panama to US and Europe, we depend on bunkering down under. How can we go from a situation which provides no security to find suitable and available bunkers into 2020 when LS regulation will introduce much tougher obligations?

So before sending our ships down under we are seeking some comfort to make sure they will be able to turn back”.

Thank you,

Bernard Vidil
Chairman of Compagnie Maritime
MARFRET

port of Tianjin and *Maersk Honan*. Dave MacIntyre digs into this persistent and dangerous process on page 63.

Last Spring we published a look ahead to the anniversary of **50 years of container trade from Europe**, and now that anniversary of the arrival of the *Encounter Bay* in Fremantle and then the east coast ports, has come and gone. In this edition we provide a trio of articles covering the anniversary celebration in Fremantle, a summary of the history and a very special recollection by Bill Guest of life in a shipping company both before and after the revolution of containerisation. It really highlights the massive efficiency gains that the container has yielded but it might leave you pining for the good old days.

Our main feature in this edition is written by Australian expatriate John Pagni, now living in Europe. John delves into a number of **new technologies in ships** that are now being brought into operational service in order to improve the efficiencies and reduce fuel use and harmful emissions

from ships. No one might even notice that one clean fuel technology that he didn't investigate was nuclear power, but don't laugh. Pocket nuclear reactors are now safer and cheaper than they have ever been, their only emission is steam and Russia has recently launched a new nuclear-powered ice breaker, with two more planned to follow.

John Pagni's review of future fuel developments is also a must read as we approach the year of the **IMO 0.5 per cent sulphur cap**. After a lackadaisical start, the major oil companies are now tussling for top spot, with Exxon Mobil and others expanding their supplies in the major bunkering hubs and Total recently announcing a global series of workshops focussed on how they can meet the demands of shipping. Closer to home, Viva and Caltex have confirmed the capability to deliver, here in Australia if necessary, but they are questioning the true level of demand. Most international vessels do not plan to bunker in Australia but there is a level of demand from the seasonally

Australian-based cruise sector, as well as the smaller general cargo and liner vessels, which service the Pacific island trade. Shipping Australia has also consulted with AMSA to ensure that low sulphur fuel suppliers are listed in the register of local fuel suppliers (which is a requirement of MARPOL Annex VI) by 1 July this year.

This edition, we are pleased to feature Captain Jeanine Drummond, harbour master Newcastle and the inaugural recipient of the Woman in Shipping award at last year's DCN Maritime Awards. Jeanine has packed a lot of maritime into her tender years and I'm sure you will enjoy the read.

And to take a lead from newly elected Prime Minister Scott Morrison, let me say "how good is Geoff Dalgliesh!" Geoff, our Profile feature in this magazine, took over seamlessly from Bill Guest as Shipping Australia's Queensland state secretary last July and, as well as keeping the state committee on track, within a few months delivered another great Shipping Industry Ball. With the support of sponsors, \$8000 was donated to the chosen charity, Tangalooma Ecomarines.

Anniversaries is a good note to finish on, as everyone loves a party.

Congratulations to Kevin Clarke, who has led Mediterranean Shipping Company Australia from its establishment to celebrating 30 years in Australia this April. Shipping Australia would also like to acknowledge Ross McAlpine, who was with MSC(A) for most of that time and last year officially retired from the company. Ross has recently also stood down from his role as chairman of Shipping Australia's public relations steering committee, thank you Ross and best wishes for your retirement.

MSC Australia marks 30 years of growth and opportunity

MSC Australia has come a long way since 1989. From six MSC staff, offering a fortnightly container service to South Africa, MSC Australia now provides its customers with direct connections to all major overseas markets.

Now, MSC Australia has expanded to more than 300 employees, and vessel calls in seven major ports around Australia, operating seven weekly liner services. It is a story of growth and opportunities, with more to come.

One particular highlight was the visit of the MSC *Fabienne* on its maiden voyage in 2004 to Sydney Harbour, where key dignitaries and clients were invited onboard to tour the state-of-the-art vessel, which at the time was the largest to call Australia.

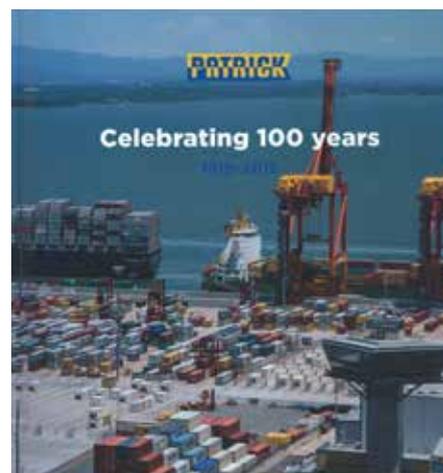
MSC also brought new life to a forgotten heritage building with its new Australian head office in Fremantle. 11 Cliff Street is a stunning landmark, complete with a 12-metre-wide, glass-fronted annexe and is the result of a four-year renovation project.

Growth will continue across all operations in Australia, particularly with regards to MSC Cargo, MSC Cruises and MEDLOG activities. There will be continued diversification and futureproofing within the company to enable MSC to react quickly to local market changes and demands.

"I congratulate the entire team of more than 300 staff on their achievements, and I know that their loyalty and excellent attention to their tasks has made all the difference. I am also very mindful of the contribution of our clients, who we thank for their custom, and we assure them of our utmost respect and care at all times," said Captain Michele Bordiga, chairman of MSC Australia.

Evening cruise and fireworks

Some 140 customers, business partners and employees gathered in Sydney on Friday, 5 April to celebrate the 30th Anniversary of MSC Australia, with an evening cruise on Sydney Harbour, featuring a tug boat salute and spectacular firework display in front of the iconic Sydney Opera House. Guests included MSC *Geneva* representative Captain Michele Bordiga, longstanding clients, Ports Australia and New South Wales Port Authority members, key service providers from across Australia and New Zealand and local MSC staff.



Congratulations also to Michael Jovicic, heading up Patrick Terminals and celebrating their 100 years in May. Their long and proud history as a steamship company and then stevedore and container terminal has been captured by Claude Varnier in a wonderful commemorative book. ▲



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VIEWPOINT

A small step towards a digital world

By PETER CREEDEN, director, MPC International Pty Ltd

In the past month, the shipping industry has taken a step forward towards meeting the expectations of the digital world by establishing a neutral and non-profit association whose aim is to set industry wide standards. Hopefully, this is the first step towards getting all transport sectors to have a common focus in sharing and improving data standards. By taking this step, they will be ready to meet the changing requirements of a truly digital world.

Four of the world's largest container lines: Maersk, Hapag-Lloyd, Mediterranean Shipping Co and Ocean Network Express, have joined forces to establish digital standards. This new association is called Digital Container Shipping Alliance (DSCA), www.dcsa.org, and will be based in the Netherlands. The DCSA's focus will be on improving standardisation, digitalisation and interoperability. The association's aim will be to publish and make available all standards to external parties. The DSCA will also be open to all ocean carriers who wish to join.

The appointment of Thomas Bagge, ex Maersk, as the CEO of the DCSA is a good start. Having a dedicated organisation focused on driving common standards will go a long way towards overcoming the lack of a common foundation for technical interfaces and data interoperability. This foundation is needed to support emerging technologies such as block chain and the Internet of Things (IoT). The DCSA has clearly stated that it will not develop or operate any digital platform of its own. This is a great aim, as it will allow for effective collaboration with the wider supply chain.

The DCSA has all the top players except CMA CGM. They were onboard during the early discussions but have decided to go it alone. On 26 April 2019, CMA CGM launched their own e-solutions digital ecosystem. This

new ecosystem is comprised of an online agency and will fully support Electronic Data Interchanges (EDI) and Application Programming interfaces (API). It is not clear if CMA CGM intends to set its own digital standards. In a recent interview, Thomas Bagge stated that he hopes to get them back onboard.

The DCSA isn't a new idea. The first association that tried to establish standards for the shipping industry was the International Transport Implementation Guidelines Group (ITIGG). This group of specialised individuals, mostly IT experts, engaged in the development and implementation of UN/EDIFACT standard messages for electronic trading in the transport industry. This group was established in 1995 and focuses on ensuring there is a standard in Electronic Data interchange (EDI) messages. The establishment of www.smdg.org and the BAPLIE message standard has been a great accomplishment for the industry, which still refers to these standards today.

Unfortunately, SMDG only defined the messaging types and didn't address the underlying issues about data quality and data ownership. This has led each industry player to establish individual connections, or 'one to one' connections, where both parties must agree on each data sets. This lengthy and very subjective process has been a hindrance to innovation and has resulted in poor data quality throughout the supply chain. Finding a path to support digital platforms that support a 'one to many' connection will be an important step forward for the industry and how it interacts with the wider supply chain community. It is unclear if the DCSA will replace ITIGG or work in conjunction with ITIGG.

The challenge facing shipping lines is not just poor data quality. The biggest challenge

facing shipping lines, is the wider supply chain industry is moving quickly ahead in setting their own digital standards and pursuing true supply chain transparency. A great example of the wider supply chain industry collaboration was the GS1 led APEC report about 'Export Supply Chain Visibility Project.' This project focused on establishing the digital connection between a product, a pallet, and a container, and how to link the data sets across all industry players in the supply chain. The responsibility of DCSA or any digital platform should be focused on eliminating the data silos separating the transport sectors and to support the growing push for automation.

In a recent report by McKinsey & Company, *The future of Automated ports*, it was found that data-infrastructure applications have huge potential. The current limitations of data quality and lack of data analytics are the biggest constraints on automated terminals. This is primarily because the data analytics aren't strong enough to run automated ports efficiently. The data analytics were hindered by the lack of data quality and missing agreed upon standards.

Having efficient ports eliminates a big bottleneck and allows for efficient vessels, efficient trucks, and efficient trains. We need all transport sectors to have this common focus to share and improve data standards.

While the creation of the DCSA is a good start for the shipping industry towards taking a leading role in standardising data, it is just the beginning. The industry needs to continue to evolve and adapt, so that it can find common ground with the wider supply chain and create a foundation to harmonize systems. This is how the digital platforms of the future will be created and how the shipping industry can retain relevance in a fast-changing digital world. ▲

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GEOFF DALGLEISH, SAL Queensland State secretary

It's all about adapting to industry changes

By A SPECIAL CORRESPONDENT

This Profile is somewhat different from some others because much of what Geoff Dalgliesh has to say is about the future, while others tend to talk about the past, so that it sometimes reads like an obituary.

After almost 30 years in the shipping industry, Geoff predicts the continuing consolidation of smaller lines into the rising tide of mega lines.

"My thoughts on coastal shipping," he says, "are that we need another avenue to transport goods between regional centres. Shipping is an alternative in Queensland, where about 90 per cent of our goods go by road between Brisbane and northern regions.

"Future issues for SAL include continuing to adapt to changes in our role as the industry's peak body due to reduced numbers of shipping companies, hence fewer members.

"Certainly our industry has come a long way since my great-great grandfather, William Dalgliesh, arrived in Geelong from the Galashiels area of Scotland in 1854, and his mother's side of the family, the Cruickshank's (another Scottish name), came from Ceylon in 1878, where they had a tea plantation.

"Now I'm the family's fifth-generation Australian but we appear to be still going strong in the old country – a few years ago I was driving through Scotland's border region near Galashiels when I saw a road sign advertising Dalgliesh Motors".

Forward now to Australia, and his first school with only 30 pupils at Berrigan, south-west of Wagga Wagga, where his parents were farmers. Then he moved as a boarder to Wagga High School with 1300 pupils.



Geoff presents a cheque for \$8000, raised from the 2018 SAL Queensland ball to Kylie Roche, operations manager, Tangalooma EcoMarines

His first job was in Wagga – an entry-level job where he did everything – before moving to Sydney with AMP, where he met his future wife Ros.

"When I left AMP, Ros and I moved to Port Macquarie," he says. "I bought a bread run there – Mid-Coast Bakeries - and worked seven days a week delivering to shops and to families.

"Things I remember from these years include: surprising a nude lady customer sunbaking round the back of her house; the Challenger disaster; the

nurse taking me outside for a recovery smoke after my first child was born, and forgetting we had left my wife unattended with her newborn baby.

“After four years on the bread-run I took a job as a rep for Philip Morris Limited but was made redundant in the early 1990s, along with a number of others” ...

Time, maybe, to jump ahead to Geoff's thoughts in 2019 ...

He says, “Closures and amalgamations of the shipping lines will probably result in there being only six mega lines - Maersk, MSC, CMA, China Shipping, One, and possibly a Taiwan merger.

“Ships will continue to get bigger and more eco-friendly, with a lower sulphur cap to take effect from next year. Bigger ships are already calling our region. Only 30 years ago the average size of liner ships was 1000-1200 TEU; now we've seen one of 8000 TEU in the port of Brisbane.

“But it seems to me that the speed of introducing these larger ships is ahead of the average growth of our exports and imports. At some point something has to give.

“My thoughts on coastal shipping are that we have a blue water highway to utilise. Providing the Reef is respected, in adverse weather a coastal shipping service could access affected regions much more quickly than road or rail. There are no maintenance costs on the blue water and carbon emissions are lower than the other forms of transport.

“Past investigations into Queensland coastal shipping generally failed to come off, mainly due to the two-way traffic imbalance.

“Fostering coastal shipping here includes inspiring investor confidence, should the right prospectus and plan eventuate. With close and creditable relationships in the market place, then I feel the right service could succeed.”

His next job was in logistics with NZ Cargo Services at Botany. He stayed there for two years before joining Seaport Shipping Services as New South Wales State manager. Seaport Shipping were agents for the South Pacific Shipping Line, focusing on the Australian-New Zealand trade.

He worked for them for four years, with responsibility for the company's liner, logistics, bulk shipping and finally looking after Marfret for 2 ½ years, as national manager, which included Heatherington Kingsbury's operations



Geoff welcomes guests to the 2018 SAL Queensland Shipping Industry Ball

run by former SAL chairman Michael Phillips.

When he left HK his successor was James Masters, now his opposite number for SAL in Victoria.

“In 1999 K-Line offered me the job of New South Wales State manager, where I stayed for 19 years, most of them with the legendary Yuzuru Miyachi as managing director, before being posted to Brisbane in 2006.”

Then on April 1, 2018, the three main Japanese lines - K-Line, MOL, and NYK – merged their container operations under the name of Ocean Network Express and sourced its staff from all three lines. The result was that Geoff was made redundant.

Four months later he was appointed Queensland State secretary for SAL.

During his shipping career, Geoff has seen many changes in the overall industry, including the demise of Friday afternoon sessions at the Sydney Bowling Club, when industry events of the week were revived.

“I've worked in shipping for 29 happy

years, of which my 19 years at K-Line were the most enjoyable,” Geoff says. “It was like having a massive family!

“As for the future of SAL, at 65 I see the surviving, much larger shipping lines being more reliant on our advice, as government agencies on all levels make changes to environmental, terrorism, border and DWAR regulation..

“Carriers appear to be focusing locally more on commercial aspects of their business, and reducing and or centralising local administration, thereby taking some of the control and autonomy away from the local scene.

“We still get support from our established carriers but reduced numbers and management changes mean some of this support has dropped off. Other links in the chain beyond the carriers, including the port of Brisbane, are still very supportive however, and we couldn't do without them.

“The bottom line from a local perspective is that SAL Queensland will have to adapt.” ▲

JEANINE DRUMMOND, master mariner, harbourmaster, Port of Newcastle

When the hardships of two years before the mast were replaced by not having a phone

By ARCHIE BAYVEL

“I’ve just turned 43, and my career so far has been a wonderful adventure with wonderful people - always exciting, even at times when the language on the bridge was excellent,” says Captain Drummond.

“Everyone here calls me Jeanine, although I revert to Captain Drummond when I need to. I hold a Master Class 1 Unlimited Certificate of Competency.

“I first sailed as master when I was 29, and first went to sea aged 19.

“My first-ever ship was the *Australian Venture*, a container vessel out of Port Botany, and I was in my first year at the Maritime College in Launceston. We sailed the full circle – Cape Horn, Cape of Good Hope and all – before ending back at Botany three months later.

“These were the days when there were no phones to call home. You wrote letters and mailed them at your next port of call.

“It will only be when airline passengers are no longer surprised to hear the female voice say, ‘this is your captain, or first officer, speaking’ that gender balance in traditional male roles will be considered ‘normal’.

“But I’m not the only woman harbourmaster around. Josephine Clark held the job at Eden for years



and is now marine pilot at Port Kembla. And there are many other women marine pilots and harbour masters, not just in the Australian area but around the world, including in the US, where a daughter, third officer, was piloted out of port by her mother recently”.

Jeanine has been harbormaster at Newcastle for 10 months now. Before that she was deputy harbourmaster and head of operations at Sydney and Port Botany.

She was born at Narrandera, in New South Wales, but her family moved to Empire Bay when she was nine and she went to Woy Woy High School, where she contemplated a career in hospitality.

“Mum worked in real estate and Dad was a handyman and that was good ‘cos it meant he was around a lot while I was growing up,” she recalls. “My parents still live on the Central Coast.”

Eventually, however, she elected to go to the Australian Marine College at Launceston, where she did a four-year cadetship, spending half of each year at the college and the other six months at sea.

“I was the only girl in that shipping company’s year’s intake,” she says. “One spends 20 weeks as a trainee integrated rating; during that time you study all aspects of being a mariner before specialising in engineering, navigation, or whichever branch of the profession you want to pursue.

Jeanine's career in a nutshell ...

For technically-minded readers, Jeanine describes her career:

I worked as a marine consultant for Hirarc, where I did extensive work with Smit Towage providing marine advice throughout the commencement of their first Australian operation in the port of Gladstone.

That included designing towage-specific local knowledge training and a thorough understanding of how the pilot manoeuvres the ship in and out of each berth, whether loaded or light ship, and in various weather and tidal conditions in Gladstone Harbour.

Much of this work was undertaken in consultation with the port regulator, pilot manager and other significant stakeholders, including classification societies, insurers and auditors.

As a tug master with Svitzer Australia I was part of a close team of pilots and tug masters, who worked well together.

With Woodside Petroleum I was master of the FPSO *Nganhurra* and participated in the operations set-up and commissioning of that newbuild, including its maiden voyage to Australia.

At Teekay Shipping (Australia) I sailed as master, chief officer, and 2nd and 3rd deck officer. As master, I completed many movements under pilot supervision to gain pilotage exemptions.

My time at Teekay also provided shore-based secondments to complement my sea experience, with extensive operations and commercial experience, both as ship owner/operator and as agent.

"After four years I graduated with a second-mate's ticket. For the next six years one works one's way through the ranks to – depending on your competence – becoming a master.

"During the early years of the 2000s I



also completed a Bachelor of Business degree by distance education, through the University of Tasmania. I studied while we were at sea. The master of whatever ship I was on would seal up my test papers and post them to the university when we arrived at a port.

"Then somewhere along the road I married Johnathon. We'd known each other at college 10 years earlier but I was too young and John was two years ahead of me, and married someone else anyway.

"But when we met again he was a marine pilot, single again, and our relationship blossomed. Now we have a daughter aged 10 and a son of seven, plus John's first two children; they live with their mother but I see a lot of them.

"I gave up going to sea when I was six months pregnant with our daughter. I was already shore-based then and working as a tug master in Gladstone, where we lived for six years before moving to Sydney.

"My last trans-ocean command was the *Nganhurra*, a floating production and storage offtake vessel – an FPSO for short.

"Specifically built in Korea, it had a full oil rig on its topside and I was one of its commissioning masters bringing it from Korea to Dampier, then to Singapore for modification and finally to Exmouth's wellhead on the North-West Shelf.

"There it was secured with its bow

connected to the well 450 metres down on the seabed.

"When cyclones blew up the vessel was disconnected and the ship sailed away until the cyclone had gone.

"There were three masters who rotated on the ship just waiting for a cyclone to come along, so they could sail her to safety. I stayed on the *Nganhurra* for about eight months.

"I still work with many of these people, one makes wonderful friends at sea.

"Here in Newcastle the port employs a lot of pilots. We have 24 of them.

"One issue we are working on at present is escort towing, so that 245 metre oil tankers can use the port.

"Coal ships up to 300 metres have long been able to navigate the Newcastle channel but every simulation that was run for loaded oil tankers showed that 180 metres was their maximum, until different types of towage were explored."

What's her next challenge? – "Newcastle, I love it. The place and the job. New stakeholders, new team, Everything!

"I like the surprises and inspiration that come with being a woman doing my job here." ▲

** Jeanine Drummond is the inaugural winner of the Women in Shipping & Maritime Logistics Award, which she received at the annual Australian Shipping and Maritime Industry Awards on 22 November 2018.*

Maritime gears up to meet new global challenge

By JOHN PAGNI*

The IMO 0.5 per cent Sulphur fuel limit and the UN body's target of cutting 2008's greenhouse gas emissions (GHG) in half by 2050, will require shipping to take bold decisions on new innovative technologies in order to not only comply, but help by cutting costly fuel bills too.

Transport – shipping in particular – is not known as a cleantech sector nor one to swiftly take up new ideas. But with the clock ticking and the world watching, the time has come to change old habits. The good news is that despite the bad press and general public perception, shipping has been by far the cleanest mode of transport for ages due to economies of scale.

Figures from many sources show clearly that although far from perfect, ships leave other transport modes far behind in efficiency and emissions. While 90

per cent of global international trade is carried on water, it is only responsible for 3 per cent of the planet's greenhouse gases (GHG).

For example, a ship delivering 1000 TEU containers emits the same as 500 trucks or 17 trains. Air transport rates at 435 grams per thousand kilometres (g/tkm), a truck's is 80g/tkm and a cargo ship 7.9. However, the huge box ships now plying the oceans rate just 3g/tkm, according to a 2014 IMO GHG study.

In Australia's case, shipping is responsible — like the rest of the world – for the overwhelming share of its international trade – no great surprise for an island nation. The case for the 0.5 per cent S limit is not only its increase in human and animal health and welfare and their associated costs, but also for the environment too. *(OzStat said it was 85 per cent but that seems too low, as Finland's is 90 per cent and we have the rail option. But he didn't say what that included, so I suspect it covered services too).*

Optimal energy use is crucial in shipping nowadays, with fuel making up 50-60 per cent of a vessel's OPEX – getting the most out of each drop is priority No. 1. A number of firms offer a range of solutions, which makes the final decision on which one(s) to invest in vital – and difficult.

Sails force – wind propulsion returns to merchant shipping

The technology attracting the most interest due to its theoretical and so far, practical evidence, is in fact old. The Flettner rotor (or mechanical) sail – named after its German inventor – was first deployed aboard a ship in 1921, using the Magnus effect .

Put simply, it works by being rotated in windy conditions, then the magic works. Technically, the vertical tube has a thin layer of air around it which creates a perpendicular force powering a vessel forward. For a layman's explanation see: <https://www.youtube.com/watch?v=2OSrvzNW9FE> for a 'Bend it like Beckham' demo.

The most successful, indeed almost the



Viking Grace and sail (not in action due to its approaching harbour)

only, references are from Norsepower, a Finnish company which is the market leader. "We have modernised entirely this near-century old concept by introducing composite materials and an automation system," says Norsepower CEO and partner Tuomas Riski, "we have three customers and many in the pipeline."

The rotor sail's composites consist of carbon and glass fibres for the outer spinning column, which rotates on two bearings with a normal steel column inside. Power to propel it is supplied by a small electric motor. "It can rotate in both directions like a yacht when tacking or jibbing," Riski adds .

Norsepower's first Flettner was on Bore's RoRo *Estraden* in 2014, which was a trial for both companies, with two units installed, but firmed into an order when their efficacy was proven. Another is on the LNG cruise ferry *Viking Grace* (see Shipping Australia - Spring 2012 edition).

Lastly, *Maersk Pelican*, 109,647dwt LR2 (long-range) product tanker that has two 30-metre tall by 5-metre wide sails. Maersk Tankers has said that if the savings are proven – and so far the results are described as promising – then the rotor sails may be put aboard 80 of its large and medium-size product carriers.

Echoing textile sails of yesteryear, mechanical sails allow a vessel to maintain its service speed using less power, thus saving fuel. But what are the financials? Riski reveals each ship set costs €1-2 million (AUD1.6-3.2 million), whether retro or newbuild, and consists of foundations, cables and automation system, plus sail(s).

"Payback in the case of *Estraden* at today's delivery price would be under four years. Currently, typical payback would be three to eight years," says Riski. And for the *Maersk Pelican*, although data is still being gathered and analysed, the technology is working, and in favourable winds the ship clearly goes faster than before, so it attains the same service speed using less power and thus fuel (and ergo less emissions)."

Riski adds that the largest rotor sails, such as on *Maersk Pelican*, provide up to 3MW-equivalent of power, while using less than 90kW to spin the sails.

Retrofits can be carried out while normal drydocking takes place and the sails can be fitted when the ship is berthed, as happened in the case of *Estraden* and *Maersk Pelican*. "With more sails (per ship) fuel costs can be cut up to 20 per cent. In addition to the wind conditions of the route, it depends on the speed – the faster a ship goes,



The rotor sail spinning like hell at night in favourable conditions

the smaller the percentage savings are, due to the propulsion power requirement."

In March, Norsepower got the first type approval design certificate from DNV GL, based on the classification society's assessment of the rotor sails that were already fitted on *Maersk Pelican*. The

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Norsepower Rotor Sail

Reduces fuel consumption and emissions by producing thrust from wind.

The Magnus effect explained
View from above

First efficient and easy-to-use mechanical sail on the market.
The spinning rotor creates a thrust force with the Magnus effect, reducing the power requirement from the main propellers.

The targeted annual savings are:
- 300 tons of LNG fuel
- CO₂ emissions reduction of 900 tons

Rotating rotor
Upper bearing
Electric motor
Support tower
Lower bearing

Thrust
High velocity - Lower pressure
Wind
Low velocity - Higher pressure

This project has been awarded by
VIKING LINE

norsepower™

previous month, Norsepower won the 2018 International Quality Innovation Award and last year received the World Wildlife Fund's Climate Solver prize.

Others are entering the market but as yet have more theoretical than practical experience. Airbus-supported Airseas, will try automated kite-like sails in 2020, estimating 20 per cent cuts in fuel burn on the 13 day voyage between France and Alabama. (www.airseas.com)

Spain's bound4blue uses automated 'wingsails' to harness the wind, which are also collapsible and fold up into a deck housing. It claims up to 40 per cent in fuel savings and says it is negotiating with shipowners, as its reference base is just a 40 metre long fishing and 60 metre theatre vessel.

Magnuss of USA claims 50 per cent in the fuel savings bidding war using rotor sails again, but with the innovative tweak that they can be retracted into the ship. "It's just a better mousetrap", quips CEO James Rhodes. Magnuss' target group is Panamax dry bulkers. The idea is that the rotor sails will not get in the way of loading/unloading by crane. The company has yet to get its idea off the ground so to speak, though it has raised capital now to promote its innovation. (<http://magnuss.com/news.html>)

Hull of a question – answer: bottom bubbles?!

A technology attracting attention due to its simplicity, hull air lubrication is another old idea brought up to date by the wonders of modern engineering and IT.

"Air lubrication dates from the 1850s," says Noah Silberschmidt, CEO Silverstream Technologies, "but we have achieved a very good energy balance, meaning not a lot is spent producing the air that goes into our air release units (ARU), which then spreads it equally in a thin layer across the flat bottom of a vessel.

"Silverstream's air lubrication system (ALS) creates micro-bubbles creating an 'air carpet' along that flat part. This minimises the friction resistance as most of a ship's energy created aboard is lost to various frictions the vessel faces and little actually used in forward propulsion," Silberschmidt explains, so allowing the ship to sail more efficiently while cutting fuel consumptions and emissions. See <https://www.silverstream-tech.com/the-technology/>

Among those offering ALS to ship owners, the UK-based Silverstream Technologies is the most advanced. The first development was the Mitsubishi Air Lubrication Systems (MALS) in 2012, that has three hull outlets. There were negatives experienced, such as effects on the propeller in bad weather, and air bubble size changes. The last known installations on two passenger ships were for AIDA's Japanese-built cruise ships *AIDAprima* and *AIDAprera*. Although MALS claims CO₂ savings of 35 per cent 'with a high-efficiency ship hull', no figures for the AIDAs have been made public.

Competing concepts, such as air cavity ships (ACS) and its similar air chamber energy savings (ACES), plus winged air inject pipe (WAIP) were all tried, tested and discontinued for various reasons.

Silverstream System is available for both newbuilds and via retrofitting on all vessel types. Silverstream's reference list demonstrates its ALS saves 5 per cent on a chemical tanker, 6 per cent on cruise ships and 8 per cent on large flat-bottomed tankers – numbers certified by classifications societies (Lloyd's Register, DNV GL) and others (Southampton University, HSWA, Carnival Corporation, Shell).

"Typically, we work with vessels that have a busy operational profile (250 days/year), higher-than-average speed and a large flat bottom. For a tanker, it's 40 per cent of the surface

area to 25 per cent for a cruise ship," Silberschmidt outlines, "but cruise ships steam fast and have a high fuel burn."

The numbers translate why more fuel can be saved in percentage terms depending on the flat bottom area size. "We target a two to three-year payback – based on spot prices," Silberschmidt reveals.

"The shortest retrofit installation was during a six-day drydock, but took place in a well-organised yard. Typically, it should be longer, while the ship is having other work done, such as scrubbers or a BWTS fitted, during routine drydocking. On average ten to fifteen ARUs are fitted: we cut out a space, put them in and then paint."

"As they're prefabricated it took three days to put them in and another three to paint."

He is citing Carnival's *Diamond Princess* cruise ship retrofit done by Sembcorp in Singapore. Silverstream's ALS will be fitted into Grimaldi Group's 12-ship hybrid RoR os, on order from Jinling in China. (See Grimaldi Green case study box)

Maintenance is simple. Each compressor supplies two ARUs and is controlled by frequency converters, run automatically by a system made in partnership with Wärtsilä, either in the engine room or wheelhouse, as preferred. The compressors are the same as those in water treatment plants ashore and used to run 24/7/365. Filters and an oil change per vessel suffice, and service costs are low at AUD14,000 once a year.

"It's a stand-alone system or may be fully integrated into the vessel's control system, and is designed to switch on at 11 knots and off at 10 knots, so if a ship is going 10.5 knots when manoeuvring or a pilot is aboard, it is not continually tripping in or out and the crew need not do a thing."

What affect do conditions have? "We can still create the air carpet that sticks to the boundary area in bad weather, but it's more complex as resistances are changing."

Silberschmidt stresses that testing should be transparent and relevant. "In shipping, new technology is usually compared before and after drydocking, when the ship's hull has been cleaned and painted, so measuring a new propeller and/or rudder improvement is difficult."

Silverstream's simplistic approach stretches to bona fide results by turning the system on and off for six hours, when the ship is moving in a straight line at the same speed. "It takes two minutes to see a drop-in shaft power when it's turned on, then ten minutes

later the speed increase is noticeable. Lower speeds see a higher increase and vice versa.”

So, it is easy to test, despite factors like wind, waves and current that may impact the hull. A side benefit is lessened hull fouling. Though the evidence is subjective and scientifically uncorroborated, Silberschmidt claims that all the vessels using the Silverstream System ALS, ships’ management have reported “much less fouling or none at all on the flat bottom.”

“Some say periodic propeller cleaning has been cancelled as it was unnecessary, as both that part of the hull and propeller was cleaner than before.”

“There has been no growth on the bottom – proven and verified by diver surveys or during compulsory drydocking.”

Anti-fouling: foul play or be fair?

Which leads nicely into other hull treatments: preventive anti-fouling paint or regular cleaning by divers, supplemented by more comprehensive blasting during drydocking. The former has a long record, but changes are afoot as new entrants intend to disrupt the market.

Biofouling is as old a problem as water-borne transport. Anti-fouling coatings on ships and boat hulls to prevent what is charmingly called ‘colonisation’ by various creatures and plants of the sea or biofouling. The worst colonisers being shellfish and barnacles in particular. Although generally small, they can take over a ship’s hull to the point where the extra weight, and more importantly, roughness, seriously adds to speed and fuel costs - [like snowboarding with rough stones on the snowboard bottom.](#)

Copper sheets were nailed on to wooden hulls in sails days. Metal-based compounds appeared with metal hulls, which kept the offending biofoulers at bay but leached into the water, causing damage to the marine environment in general and ultimately even appearing in human food.

In the 1960s, one predominated: the organotin tributyltin (TBT). This was effectively banned by the International Convention on the Control of Harmful Anti-fouling Systems on Ships that came into force in 2008, as it had proven negative effects on marine life as well as wonderful results.

Swedish scientists took another approach employing Mother Nature. Selektepe® was developed by I-Tech of Sweden (aided by AstraZeneca’s Gothenburg BioVenture incubator hub) after over a decade of development,

Grimaldi goes hybrid for green newbuilds

Probably a sign of the shape of ships to come in employing packages of fuel-saving technologies — or hybrid vessels — is the Italian family-owned shipowner and operator’s order for twelve new ro-ro ships from China’s Jinling yard.

The ships are notable not only for their size and capacities, but the environmentally friendly features on board. Nine will have 7,800 lane metres that can take a whopping 500 trucks and trailers. The other three are for its Baltic subsidiary, Finnlines are a bit smaller with 5,800 lane metres. The latter trio will be built to the Finnish-Swedish ice class Super 1A, to sail in the winter ice up north.

All twelve will have a 5,600 square metre car deck, plus a weather deck for 300 TEU. And they will continue established Grimaldi policy of using scrubbers to cleanse their exhaust, and using HSFO during sailing. Battery power in port will guarantee its “zero emissions in port” promise. The lithium-ion battery bank, which will be charged during sailing, will provide power for the ship while at berth and manoeuvring.

In addition, there will be a Silverstream ALS fitted, and optimised energy efficiency is ensured by the vessels’ hull lines, including the most advanced integrated propeller-rudder system. As well as the shaft generators, one of the hybrid sources will be SOLAR PANELS! 600 Six hundred square metres of them and a first on such a big ship.

The design of the “Grimaldi Green 5th Generation” (GG5G) was developed by the Grimaldi Group’s own Technical and Energy Saving Department, in cooperation with Danish ship designer Knud E. Hansen, incorporating innovative patented or copyrighted equipment.

At a total cost of about €800 million (AUD1.26 billion), each ship will be 17,400dwt/64,000gt, 238 metres long with a 34 metre beam, mixing old and new, or fossil fuel with electric propulsion.

“These vessels will offer us the lowest possible fuel consumption and exhaust emissions, and are in line with our investments in sustainable development. We are proud that these exceptional technologies on board will make the vessels the most innovative and efficient vessels in the world,” says Emanuele Grimaldi, Grimaldi Group and Finnlines CEO.

“Reducing fuel consumption and, consequently, cutting harmful emissions are categorical imperatives for our Group”, says Grimaldi Group President Gianluca Grimaldi.

“It is the first time in the world that such powerful batteries, equivalent to those equipping 90 Tesla cars, will be installed on ships,” continues Grimaldi MD Diego Pacella.

finally reaching the market in an anti-fouling coating for ocean-going vessels in 2015. “Selektepe deters barnacles from attaching to a hull when used in an anti-fouling coating,” defines Catherine Austin, I-Tech’s director marketing and communications.

Its pharmacological ingredient is added to marine paints intended for hull coverings. Importantly, Selektepe meets the EU Biocide Product Regulation and is approved by leading shipbuilding nations Japan, China and

South Korea. It is now in the range of two of the five major marine paint makers: CMP and Hempel. Meanwhile Akzo Nobel is experimenting with ultra-violet LED lights in the hull that has so far been a success.

Selektepe says 350 million tonnes of fuel is burnt annually by the global fleet emitting 1.1 billion tonnes of CO2 and 10 million tonnes of SOx. Unprotected hulls without an anti-fouling coating could raise a vessel’s fuel bill by 40 per cent due to attached marine life causing



Shows the main engine (right, propulsion shaft and the PTI generator (left)

greater friction called hydrodynamic drag.

“Widely acknowledged fuel savings attributed to anti-fouling coatings is 10 per cent,” says Austin. “This is quite a conservative claim, but based on assuming bunker fuel is priced at AUD558/tonne, annual savings would result in 35 million tonnes fuel saved, worth AUD19.5 billion plus 100 million tonnes less of CO₂.”

The problem is accentuated in ‘red zones’ such as Asia and Australia, where warm water temperatures pro-activate fouling. Static vessels that are laid up or newbuilds being fitted out are magnets to barnacles, mussels and worms. As Asia ships manufactured goods to the world, and Australia commodities to its manufacturing powerhouses, the problem has grown.

Selektepe’s minuscule amounts are seen as an ideal solution. Just a few grams per litre are needed to ward off barnacle larvae, with the concentration adjusted according to conditions and ship type and purpose. I-Tech recommends a minimum concentration of 0.1 per cent w/w of paint used.

“When exposed to Selektepe, barnacle larvae are repelled from a ship’s hull and kept in swimming mode with non-fatal effect. This revolutionary biotech approach to fouling prevention is controlled by the activation of the barnacle larva’s octopamine receptor and is completely unique in its application within hull coatings,” explains Austin.

“The actual cost of a Selektepe paint is dependent on vessel size, trading pattern and activity that will differ for each. Shipowners can expect to pay similar prices for Selektepe coatings as for other premium paints on the market,” reveals Austin.

Its cost-effectiveness includes reducing

hull cleaning frequency and hard scrubbing while improving fuel saving. For paint makers it is flexible and may even be used with copper-based mixes or, better still, replace the metal altogether.

To promote its abilities, an IMO II MR chemical products tanker *Team Calypso* got a free Selektepe coating in 2015. The ship has a global trading pattern, 60 per cent average activity rate, 12 knot average speed and sails in biofouling hot spots with a 25°C temperature, with long idle periods of 25 days or more.

“The vertical sides were coated with a premium Selektepe® product with a 60 month service life. Diving inspections at 36 months confirmed the hull was completely free from hard fouling with slight slime coverage. The hull had not been cleaned during the 36 months,” Austin explains.

“This is proof of what I-Tech’s ingredient can offer ship operators: a hull free from barnacles with no abrasive cleaning needed, over 60 months between drydockings,” Austin concludes but points out biofouling is increasing as water temperatures rise, so more coatings manufacturers are launching Selektepe products.

Nippon Paint recently launched the first biocide-free non-silicone low friction self-polishing copolymer antifouling coating. Nippon Paint Marine director John Drew said, “Typically anti-fouling ships paints have contained some form of biocide: copper, tributyltin, co-biocides. Biocides are today strictly controlled by national and international regulations. With Aquaterras our scientists have achieved a truly effective, long-term antifouling paint without biocides.”

Which means regular cleaning by divers could become obsolete or obsolescent at least, with hull maintenance being

carried out only during regular drydocking. Commonplace now, its practice has been limited by the after-effect of the toxic waste falling to the sea floor, while uninvited unwanted marine life finds a new home far from its own, causing further damage to the local marine environments.

Norway’s ECOsubsea and HullWiper (licenced by K-ROV in Australia) are two that have developed proprietary hull-cleaning equipment that effectively removes detritus and ensures everything is filtered into a waste receptacle for processing on shore. Hull cleaning by divers can cost AUD24-28,000 and may need to be done in several stages according to how big a ship is and its length of stay in port, and is usually done simultaneously with other subsea work.

According to Simon Doran, HullWiper’s managing director, costs are LOA dependent. “For a small 120 metre gas vessel (HullWiper is headquartered in Dubai, as it is jointly-owned by GAC and designer Robert Andersen), the rate would be AUD16,670, while for a container or cruise ship with a 400 metre LOA, it would rise up to AUD48,619.”

It must be pointed out that most hull cleaning is carried out by scuba divers, but the HullWiper is unusual in that it is an ROV and controlled by a surface operator and possibly represents better value for money, as IT relentlessly replaces people in on-the-spot work.

While prevention may appear to be getting the better of cure in this case, Austin brings hope down to Earth by pointing out that fouling is on the increase as water temperatures rise, due to global warming and increased trading patterns. “This is why coatings makers are launching Selektepe products, as this unique anti-fouling delivers the prevention needed.”

Hybridisation: the energy efficiency solution – for now

The start of 2019 saw the introduction of the IMO’s Data Collection System of vessels fuel consumption for ships of at least 5,000gt, which make up 85 per cent of all ship emissions. This echoes in many respects the EU’s Monitoring, Reporting and Verification (MRV) requirement that began a year earlier that concerned energy efficiency and CO₂ emitted. Why the IMO is cracking down on all shipping GHGs is possibly explained by Shell, that the world’s largest fifteen ships emit as much NO_x as all the world’s 760 million cars.

The Energy Emission Design Index for newbuilds will enter in phases where energy efficiency must improve over 2014’s ships, initially by 30 per cent in 2025. Together with the Ship Energy Efficiency Management Plan for all ships, these will lead to a change in propulsion energy sources from diesel engines to ultimately electric-only, from zero-carbon emission-free fuels or batteries - or something else.

On this voyage to maritime propulsion nirvana, ships will use a variety of energy sources, which is referred to as hybridisation. For instance, to comply with EEDI, a hybrid system can be installed, instead of slowing speed and thus raising its attractiveness.

“The hybridisation of a ship depends on whether it is single or double-screw and what is included in the package,” says Mårten Storbacka, WE Tech’s CEO. “Our WE-Drive variable frequency drive generator, shaft generator, DC link distribution for heavy bow thrusters, and an energy storage (battery) option too.”

Each ship gets a bespoke suite and Storbacka points to Stena Line’s eight E-Flex Ro-paxes being built in China, which will be the most fuel-efficient in the world, the Swedish company claims.

“Our E-Flex tailored solution is a shaft generator, driven by the main engine that generates all the electricity needed on-board, without using any fuel to run the auxiliary generators when sailing. This is based on our WE Drive, which allows the main engine to run at variable speed while producing electricity on-board, resulting in tons of fuel savings every day,” defines Storbacka.

The two 2600kW shaft generators, together with the WE Drive, generate power for the ship’s electrical network in power take out (PTO) mode and also utilises the common DC-link for power distribution in bow thrusters .

As an example of costs and payback, Storbacka quotes a 20,000dwt product tanker burning 15 tons daily, resulting in a payback of one to three years. Project costs per ship span from €700,000 (AUD1 million) to €6 million (AUD9.5 million). Currently WE Tech’s business is heavily skewed to newbuilds.

Another reference is a power take in (PTI) mode, with direct drive permanent magnet shaft generator fitted in the propeller shaft line after the main engine, on the world’s first LNG dry bulkers for ESL Shipping. “The solution is particularly good for winter conditions to provide an ‘ice boost’, giving additional torque to the propeller thereby helping the main engine and ensuring effective operation in Ice Class 1A,” explains Storbacka .

“The main driver for our business is more efficient engine use already in the design. Another example, is ultra-low steaming with a two-stroke main engine is less efficient than redundant propulsion (or auxiliary propulsion) utilising auxiliary engines and shaft generator in PTI mode. Then again, when deep-sea sailing at service speed the generator on the propeller shaft requires just the main engine, which is highly efficient at design service speed.”

“The main engine is obviously bigger and thus has better fuel efficiency than

an auxiliary engine, so fuel savings come from using the main engine and employing an auxiliary as little as possible. Fuel savings of 20 per cent are easily achieved,” Storbacka sums up.

Danfoss is also heavily involved in this market. It places much on its DC-to-DC converter, which can flatten out voltage (raising or lowering) easily and safely from multiple power sources, including a bi-directional feature for batteries when not suited to the grid converter, adapting a wide voltage range. Ships need flexibility in propulsion as power demand gyrates greatly at sea and when in port. (Presentations at <https://www.danfoss.com/en/search/?query=hybridization>)

Danfoss foresees other energy storage sources which its converter can manage just as well as batteries, due to its wide voltage window. Though not practical now, they may well be in the future Danfoss thinks, and is prepared for and developing.

On the horizon

There are other technologies and innovations in the pipeline, but for the moment that is where they remain. Nuclear is not considered an option anymore, post-2011 tsunami disaster in Japan, which almost turned into a catastrophe with the Fukushima meltdown.

Apart from naval craft, only four merchant ships have been using atomic power, with the last being *Sevmorput* of Russia, which has by far the longest logbook and is still working after its 1988 maiden voyage. In addition to safety concerns and astronomical costs, there is the problem

of how many ports would accept such a vessel.

Hydrogen and fuel cells have been touted as the next big maritime propulsion miracle, for years. But – there’s always a but when something seems too good to be true. Hydrogen fuel cells seem ideal: stable (meaning non-vibrating, here), produce DC electricity, have rapidly rising capacity, clean water exhaust, long lifecycle and low maintenance requirements and costs.

But it is now very costly to produce LH2 (liquid hydrogen fuel) and then store at -253°C. Fuel cells are expensive to make, and hydrogen burns in an air mix within a wide range of 4 per cent to 75 per cent - so potentially explosive.

This all leaves shipowners with a complex compendium of technologies and choices, none of which are cheap. But they are mandatory. In this situation only the fittest will survive, and size does not matter – as dinosaurs know. If they were alive – they were large-slow-moving creatures with low intelligence that failed to adapt.

Therefore the effect of AI and IT on shipping has yet to be seen or covered in detail. With growing influences these subjects are so complicated and wide-ranging, they need a separate feature on their own. ▲

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MS Viikki, the world’s first LNG-fueled bulk carrier, docked in Helsinki for media and VIP introduction

Marine fuels after 2020 – visions of things to come

By JOHN PAGNI*

The imminent introduction of the IMO 0.5 per cent Sulphur (S) for shipping worldwide has focussed minds and money in the maritime industry. Its 2050 target of cutting 2008's emissions in half is something else to plan for. While the latter is in 30 years, a range of technical and fuel type options are available to meet the 2020 requirement, which will be enforced with fines, suspensions and port bans.

Many will simply choose a compliant fuel to save on investment in scrubbers. Many ship operators will choose low-sulphur marine gas oil MGO or marine diesel oil or heavy fuel oil (LSHFO), which have had their sulphur refined down to 0.5 per cent S. (This is sometimes referred to as VLSHFO). Ultra-low sulphur MGO (also called ULSFO) has been the main choice of ferries and short-sea freighters Emission Control Areas (ECAs) that have a 0.1 per cent S limit.

At the time of writing, these fuels cost on a mid-April day on Rotterdam's Spot Market about AUD800 per ton or a premium of AUD190-265 per tonne over the current bunker favourite: heavy fuel oil or MDO variants IFO 180/IFO380, which supply 78 per cent of world bunker demand (source: International Energy Agency (IEA)).

While MGO 0.5 per cent S supply will be adequate to meet demand in 2020, that of LSHFO is more problematical. But according to the IEA, "Demand for MGO will remain elevated for the next five years, but by 2024 the fuel

market will operate on a more evenly distributed landscape in which three fuel types will claim the spoils."

The IEA forecasts that scrubbed HFO, MGO and LSHFO will then make up 97 per cent of bunker demand (see IEA chart). However, it leaves out the great green hope of power generation the world over: liquefied natural gas. LNG is seen by many politicians, business and environmental experts as best to meet future demand and environmental targets.

It is well known as the cleanest fossil fuel, as LNG cuts SOx emissions and particles (PPM) by 97-99 per cent, NOx by 85-90 per cent and CO₂ 20-30 per cent and leaks merely evaporate. But LNG has high CAPEX due to cryogenic technology needed to cool natural gas and keep it safely stored at -165°C until used aboard or ashore. Shipping demand will remain small, as even in five years less than 1 per cent of the global fleet will use LNG.

Scrubbed HSFO will require investment of €1-5 million (AUD1.6-8 million) per ship in scrubber technology estimates Wärtsilä, one of many scrubber makers with 4,000 ships installed by 2020, of the 90,000 world fleet, of which two-thirds trade internationally. Newbuild installations cost rather less than retrofits.

Scrubbers are now more reliable and technologically advanced after a sticky launch period. Three types vie for consideration: closed, open and hybrid, which all live up to their labels. The common factor is seawater, where the natural alkalinity rinses the sulphur out of the engine exhaust, forming sulphuric acid. An open system can return seawater after treatment that meet Marine Environment Protection Committee (MEPC) regulations.

Closed loop performs the same task but

uses caustic soda to boost alkalinity. The residue is disposed of ashore, while other effluent can be discharged after cleansing or stored for later disposal.

Hybrid is simply a combination of these two, which can be switched from one to the other. The decider is the seawater alkalinity: high content on most of the world's seas can use open, low needs closed, and vessels operating in both, or in areas with special rules. Not only cost counts, but space too, as scrubbers are large and tall, fitted vessels are conspicuous by their 'fat funnel' look.

So, mainly large freighters like Capesize, VLCCs and ULCCs are ideal, but all cargo ships generally, such as short-sea container carriers. Therefore, those ship types operating in ECAs and EU waters have gone for scrubbers first, but not only. Payback is complicated as it is all dependent on the fuel price.

DNV GL has a scenario of a 20MW scrubber using HFO, with a AUD243/tonne advantage over LSHFO that will mean a 16-month payback for open loop, slightly more for hybrid. If the bunker spread is an unlikely AUD63 or less, scrubbers are not viable. But even a gap of AUD139 would be less than two years.

The society also adds that scrubbers can add 2 per cent to the fuel burn, with service costs arising from low-PH corrosion in open systems and residue disposal for closed. Lastly, as the report says, "One scrubber is easy to install, 32 in the same period is difficult" with an owner having to communicate with designers, makers, class and shipyard.

The IEA states, "We assume the business case for retrofitting scrubbers largely disappears in 2021 as refiners increase gasoil output, thus scrubber demand stabilises after 2022." In addition, as fuel prices rise this will



Doing great business. Neste has made millions out of low-S and biofuels. Record dividend for 2018. Swedish-owned, -flagged and operated ship

cause demand to flatten from 2.5 per cent in the last ten years to just 0.3-1.8 per cent in 2021-2024. ULSHFO will play a bigger part in 2024 when it becomes more available and accepted.

Domesday or opportunity?

Energy giant Shell forecasts marine fuel costs will inevitably rise and has a case study for reference. A box ship carrying 7,750 TEUs (100 per cent capacity) burning 217 tons a day at AUD797/ton crossing the Pacific, would run up a fuel bill of AUD4,692,220 for a 28-day return voyage. This would increase to over AUD305 million if it operated all 365 days of the year.

Assuming a AUD280 difference between HFO 3.5 per cent S and LSHFO/MGO 0.5 per cent S would result in AUD1,700,483 extra per trip, and nearly AUD22 million more annually. Thus the quest for the right fuel-saving technology or package of technologies, achieves life-or-death status for a commercial shipping company.

Luca Volta, Marine Fuels Venture Manager at Exxon Mobil also sees the 2020 low-sulphur as an opportunity not a problem.

"We will be ready with the products and point of sales by the third quarter of 2019. That's when we expect marine customers will start to bunker as the deadline approaches."

Exxon Mobil has been preparing, like nearly all refiners since 2015 when the ECAs 0.1 per cent S came into force and the 0.5 per cent was expected. They plan their first wave of IMO 2020 compliant fuels for Antwerp, Rotterdam, Genoa, Marseilles, Singapore, Laem Chabang and Hong Kong are, with North America in the second wave.

Singapore is the world's largest bunkering market so it is no surprise that Exxon Mobil and many others have their our largest manufacturing facilities there. "Capacity expansion at the site means we are also going to increase

our capability to produce marine gas oil and fuels" Volta concludes.

Methanol is also an option. Environmentally sound with green features such as similar emissions as LNG, but unfortunately imethanol costs more than diesel and has not the same efficiency. It is toxic too. Stena Line is attempting a methanol experiment on its Stena Germanica ro-pax ferry, but results have not yet been released, but the main engines required conversion, as well as extra accessories to handle the fuel.

There is light at the end of this tunnel. Finnish refiner Neste, the world's biggest biofuel producer with refineries in Finland, Rotterdam and Singapore, which has made barrels of money producing bio- and low-sulphur fuels to meet EU and IMO regulations (the Baltic has been a 0.1 per cent S ECA since 2015) sees another market appearing.

Sami Oja, Neste Vice President, Supply Chain Management, Oil Products, surely speaks for many fuel producers when he says, "When we go to the global 0.5 per cent S change, we're looking at that as the next big step to grow our bunker business. The IMO 0.1 per cent S for ECAs gave us a business opportunity and our bunker business has grown noticeably. Now it is completely different from traditional HSFO and we are now bunkering on a much bigger scale in the Baltic."

Where does this leave shipowners?

Not everyone is happy with the outlook. Forecasting what the price of compliant fuels will be in January 2020 is like forcing "shipowners to go to the betting shop," according to Emanuele Grimaldi, managing director of Italy's Grimaldi Group.

Addressing the XXII Euromed Convention in Athens last year, Grimaldi quipped the price of 0.5 per cent S fuel is currently the "best kept secret" in the industry, as no one has certainty over its availability and how it will affect their

costs.

"Oil companies and refiners have a vested interest in this issue. It will be a simple issue of supply and demand and if I were a refiner, I would slow down production to take advantage of this situation. We (shipowners) will be the victims," he said, adding, "The lack of clarity about pricing and availability mean it is easier to determine the odds in a football game."

According to Grimaldi, the pricing differential for compliant fuels will be high in the beginning but will reduce over time. A bigger problem would be the availability of HFO in the years to come. He suggested it will become rarer, as only a few thousand ships will be fitted with scrubbers and able to use HFO and "will want to keep it".

Grimaldi Group currently has more than 40 vessels fitted with exhaust gas scrubbers – 28 in its existing fleet, as well as the dozen hybrid ro-ros and seven pure car and track carriers (PCTCs) it has on order in China. Another 20 will receive scrubbers with the vessels selected being "the younger ones in the fleet as well as those that consume more".

All this doom and gloom may cause timbers to shiver. Fatih Birol, IEA executive director, offers some cautionary soothing words, "Although the industry has had several years' notice, there are fears of shortfalls when the rules come into effect. Our analysis shows that refiners and shippers are relatively well prepared to respond, although the first year may bring some challenges." ▲

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50th anniversary of the international container trade

By MARTIN ORCHARD

Thursday, 28 March 2019, marked the 50th anniversary of the arrival of Overseas Containers Ltd's (OCL) *Encounter Bay* at Fremantle. The arrival of this vessel launched the introduction of international containerization into Australia, opening a new chapter in maritime history in this Country.



A group of attendees who were associated with the 'Encounter Bay' in Fremantle and elsewhere

Image: Fremantle Ports

As the sun was setting over the Indian Ocean, Fremantle Ports held a function to celebrate this milestone, at the Bathers Beach House, attended by up to seventy-five people, including from Sydney, Graham Lightfoot, (former chairman of Blue Star Line in Australia), and myself.

Whilst images of conventional and container vessels were continually displayed on two large screens, the attendees reminisced on those early days of containerization in the port of Fremantle, and how the industry and port have developed hand-in-hand over the past fifty years.

Chris Leatt-Hayter, chief executive officer of Fremantle Ports, gave a short address, bringing to everybody's attention the increase in the number of TEUs handled in the port, from a few thousand in 1969/70 to around

750,000 TEUs in 2018/19. In addition, Chris highlighted the increased size of container vessels, from the 1,300 TEUs capacity of *Encounter Bay* in 1969, to the 9,000+ TEU vessels that will soon be handled in the port. By a number of key measures, the CEO said that Fremantle is the most efficient container port in Australia.

Chris Leatt-Hayter was followed by Len Sheedy, OCL/P&O Container's former State manager in West Australia and Victoria, who gave the gathering a number of interesting and amusing reminiscences of the day that *Encounter Bay* sailed into the port of Fremantle on 28 March 1969, and the impact containerization had on the local shipping scene.

Fremantle Ports are to be congratulated on their efforts in celebrating this important milestone in Australian maritime history. ▲



Len Sheedy addressing the event
Image: Fremantle Ports



Personal reflections of 60 years in the shipping industry

Editors note: This is a lightly edited and shortened version of the live recollections of former Shipping Australia Queensland state secretary, Bill Guest, to an industry luncheon in December 2018. His story is remarkable, both from the perspective of his longevity in the industry and the details in his account.

It is a strange feeling standing here and literally providing a **career rundown** that has spanned over 60 years and two modes of shipping. It has been a rewarding experience in an industry which has given me many challenges, very real perceptions of involvement and a sense of worth. Many in this room have contributed to that – so my sincere thanks.

Looking back, the memories I have dredged from the depths for this address have made me feel positively ancient.

For some perspective, let's start with a few dates.

I joined the Shaw Savill Line in Melbourne some 64 years ago, on 25 February 1954. To give you some perspective, it was the year that Queen Elizabeth II made her first visit to Australia as Queen, in the *Gothic*. Prince Charles was six, Australia's population was nine million. It was two years before Melbourne hosted Australia's first Olympics and four years before the building of the Sydney Opera House commenced.

It has been said that the move from conventional to container shipping was as significant to world cargo movement as the change from **sail to steam**. I agree, and sometimes wonder why it took so long to come about.

My start in Shaw Savill was routine, with training in most departments from Passengers, Accounts, Marketing and Operations. In 1958, I was fortunate to be selected for further experience in London, and spent five weeks on

company time on the new passenger ship *Southern Cross*, sailing from Melbourne to Southampton. It was the first passenger ship with engines aft. In London, we celebrated the centennial anniversary of Shaw Savill. Then quick as a flash after six months, I returned to Melbourne on the cargo ship *Doric* via the Suez Canal.

I was transferred between Melbourne and Sydney for brief periods, and in-between time did my National Service in the Air Force at Point Cook in Victoria. That was a great experience and, it is true that in a conscientious outburst on a dark and rainy night I did do my 'halt who goes there?' warning to what turned out to a noisy garbage truck. Their response was not all that polite.

Back in the Melbourne office in 1960, I found my niche in operations as a *loading operator*. A position I thoroughly enjoyed, and this is really the guts of conventional shipping.

Once the Marketing Department had booked the cargo, it was my responsibility to fix a berth for the ship. The ship had in all probability already discharged on the coast. The route was a four-month round trip from the UK, then Fremantle, Adelaide, Melbourne, Sydney, Brisbane and back again. One way discharging and the other loading, there was rarely a combined unloading and then loading operation, except of course at the last discharge port.

I then ordered the cargo into the berth's shed several days before the ship's arrival. That export cargo could

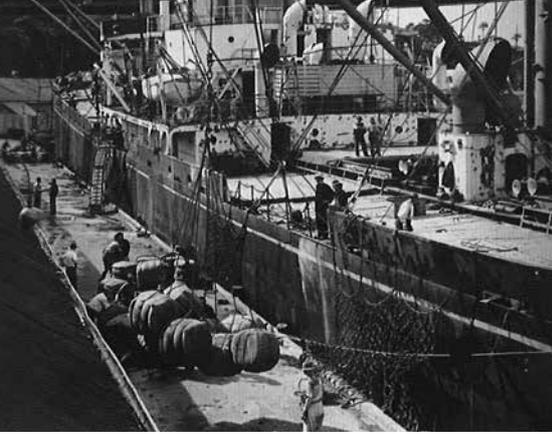
comprise: bales of wool, cartons of canned or dried fruit, sheepskins and miscellaneous general. Refrigerated cargo (meat, butter, fruit etc.) would be organised for receipt once the ship was alongside.

There were frequent occasions when I would watch with trepidation as the ship's reefer engineer would probe the lamb carcasses in the insulated rail wagons before accepting them for loading.

In those days there were large volumes of wool exported to the mills in the United Kingdom, and competition for wool orders among the brokers was intense. The wool canvasser had an important job, and the need for an iron constitution, as Scotts Hotel was the semi-official office where wool bookings would be made. I recall on occasions helping the legless canvasser to his chair and relieving him of the orders to be



Discharging cargo at Patrick Wharf, Section E Brisbane



Loading wool at Patrick Brisbane

processed. It was probably fortunate that the pubs had to close at 6 p.m. Work place health and safety would take a dim view today!

I would liaise with the receiving clerk at the wharf, over the delivery schedule, and the stevedore regarding labour requirements. We would have a stowage plan from the ships chief officer, from his discharging time in the port. Those would be confirmed or adjusted either by phone from another port, or when the ship berthed.

While there were some shore-side gantry cranes, most of the work was done by the ships gear, which on arrival necessitated the removal of hatch lids and supporting beams.

For instance, the Shaw Savill *Delphic* and *Doric* class (about 11,000 tons) had six hatchways serviced by around 22 derricks (between two to ten ton capacity) and a 75 ton heavy lift derrick at one of the mid hatches. Insulated space of 440,000 cubic feet, general cargo 160,000 cubic feet. In total that would equate around 500 TEU.

The crew was a minimum of 72. That might sound like a lot of bodies now, but not so then - deck officers, including a bosun, plus engineers, greasers, stewards etc. There was a lot of equipment to service and plenty of painting to keep the ship looking trim. They often carried a supernumerary doctor too.

The ratio of crew to cargo makes for fascinating comparisons, considering that the container ship OOCL *Brisbane*, carries 4578 TEU (5.5 million cubic feet in a conventional vessel) and has a crew of 12. The recent arrival in Brisbane of the *Susan Maersk* of 9644 TEU (twice the size of the OOCL *Brisbane*) makes another interesting comparison. All that space above deck to be used, it seems endless, a bit like the cyber cloud now, storing infinity data.

I recall that the Master of a Shaw Saville conventional cargo vessel seemed to be treated like God and lived in isolation in a suite of rooms aft of the bridge. Considering the usual lengthy time in port (five days or so) it seemed to me then that the Master expected to be entertained by the State Manager, to the detriment of both constitutions. The Chief Officer, who must have aspired to be Master one day, did all the work.

At ship arrival it took time to remove hatch covers and the supporting beams. These were placed on deck, or landed ashore by the waterside workers. Motorised McGregor hatch covers were shortly to be introduced.

The labour position then needs to be considered. If it was agreed that the ship needed (say) six day-shift, four twilight and two midnight gangs, and each gang comprised around 12 men, that's a lot of bodies and cost. For the day shift alone, with ancillary labour (watchmen, maintenance people etc.) there could be anything up to 80 men on board, or close by. All from a labour pool with no EBA in sight.

Consider also, the physical aspects of the labour and the need to stow cargoes of say wool, with bale hooks. While there were fork-lifts ashore, most cargoes needed to be manhandled 'tween decks. Compare that with the situation today, when the only physical effort is securing the lashings.

The Waterside Workers Federation were militant and exercised considerable power, one could not say unreasonably. It was necessary to order weekend labour by p.m., on the Thursday. The Stevedore may recommend that dayshift labour on the Saturday be ordered with lunch - if working to a finish, then the ship had to sail, even if there were short-shipments. With Melbourne a football-crazy city, it really was amazing how many times during the footy season that labour was ordered with lunch, yet the wharfies were all off the ship by eleven at the latest! But if you didn't order lunch the job would drag on.

It was always a good feeling to see a ship sail, even better when "last port full and down", and leave an empty shed behind, but never a pleasing prospect to notify a shipper of short shipments.

The Painters and Dockers were another union involved, but more on the import/discharge side than exports. There were rumours of criminal connections and phantom workers. In 1973, one

union official was gunned down, and in 1980 the Costigan Royal Commission¹ investigated organised crime links and tax evasion. The P&D union survived all this fuss but was de-registered in 1993 because it had less than 1,000 members, and thus was brought undone by the Industrial Relations Act 1988, ironically introduced by the Hawke Labor Government.

It would be fair to say that the days of conventional cargo ships were typified by slow progress, huge labour costs, hard physical work, and plenty of cargo damage and pilfering.

Most British ship owners had had significant ship losses during the second World War, and the rebuilding programmes had produced bigger ships with more efficient engines, and had faster and more predictable transit times, yet shore-side cargo handling had not changed, and that included a large increasingly expensive and militant labour force.

But by 1968 things are about to change.

The notoriously conservative British shipowners had been woken from their lethargy by events in the USA, where McLean Transport (who had really commenced the container transport concept in the *Ideal-X* in 1956) under the *Sea-Land* brand, was in the process of developing container carriage by using converted ships. *Matson Line* (35 foot) and *Grace Line* (24 foot) were similarly involved, but it was McLean's container configuration of 20 x 8 x 8 feet that was accepted in 1964, by the American Standards Association, that has had world-wide impact.

As the advantages to McLean's container system became apparent, competitors quickly developed. They built bigger ships, larger gantry cranes and more sophisticated containers.

Thus, on 5 August 1965, in the realisation of a stagnating industry, mounting costs and also somewhat in fear that the USA would provide a container service and poach their established trades, the British lines responded. The chairmen of P&O, Ocean Steam (Holts/Blue Funnel), (B&C - Clan Line and Union Castle), plus Furness Withy, met at Brooks Club in London to establish OCL (Overseas Container Line), which was formally incorporated on 27 Aug 1965.

What followed were full-on feasibility studies. Ships had to be designed with all the new configurations to provide for container slots. Containers, including

¹ Royal Commission on the activities of the Federated Ship Painters and Dockers Union

refrigeration.

OCL got underway in early 1966, and I was seconded from Shaw Saville Australia, Melbourne and pleased to be involved. I was number five in Australia. I should say that we already had the ASP container service from Melbourne to Fremantle, with the ships *Kooringa*, *Kanimbla* and *Manoora*, as some sort of guide.

Over the next few years conventional shipping was maintained well beyond the phase-in period of containers – some shipowners endeavoured to have an each-way bet if containers failed!

So, in January 1967 orders were placed for six 1300 TEU container ships (of which 300 were insulated). Design speed 22 knots. The tender won by a German shipyard but the British Government pressured OCL to have one built in the United Kingdom. *Jervis Bay* delivered a year late and the ship-yard could not afford to pay the delay penalties.

It was not all smooth sailing. There were no computers, larger manifests and the challenge of repositioning containers. An inland depot was established at Chullora, to support the logistics. There were other challenges like:

- Stowage of wool into containers at different densities, with possible damage to fibres;
- Adjustment to pallet sizes for maximum stowage in a container (though 50 years on, Australia persists with a different pallet size for domestic transport, which still doesn't fit properly into a container);
- Centralisation and transshipment spelt the death of many direct services;
- Door to door service and the challenges for Customs Brokers and Forwarders;
- Industrial actions against this new mode of shipping.

In January 1969, the UK Transport and General Workers Union (TGWU) imposed a ban on OCL's Tilbury operation until

terms to safeguard the conditions of workers on conventional docks was agreed. That lasted 13 months, and so it was from Rotterdam on the 6 March 1969 that Encounter Bay sailed on her maiden voyage, arriving in Fremantle on 23 March.

With all this, OCL did not make a profit until 1974.

With a new concept service, OCL London had set up in their new electronic data processing (EDP) department, with what they called MIF Suite 2, which was to capture all the data relating to the movement of every container.

In Australia, a very detailed multi-part Transport Instruction (TI) was devised to do just that. The TI would accompany the container from empty pick up to the shipper and back to the terminal. There was the naive expectation that times and dates would be faithfully recorded by all parties, so that the information could be entered in the EDP and analysed for future management action.

We Aussies attempted to gather all the data, blissfully unaware that the actions of the TGWU in the United Kingdom had stuffed the concept from inception. Despite our efforts, we suffered a similar fate because we were requesting data from organisations over whom we had absolutely no management control. Hence, if the requirement was to record the container journey from A to B to C, and there was a break in that information, then the balance of that journey could not be entered. It really was an EDP disaster, and despite being refined on the presumption that if a container arrived at B then it must have left A, it was never a useful management tool.

I was Container Movements Manager when Encounter Bay, in Sydney on 3 April 1969, and with very little computer assistance, had to distribute container volumes virtually with no more than an exercise book. I recall that part of the container management premise was that if all import ships were full of containers, then all export ships must be likewise or else a build-up of containers would occur, which would be impossible to export!

It is interesting to note that in the early days of containerisation it was possible to move domestic interstate cargo via a container positioning move, using a single voyage permit (SVP). This was especially useful from Melbourne to Fremantle. The SVP was issued on the proviso that no coastal shipping provider had a ship available five days either side of the relevant dates, it worked well. (This movement of coastal cargo by international ships was

severely disrupted by the changes to the Navigation Act and the introduction of the Coastal Trading Act, by the Gillard Labor Government in 2012.)

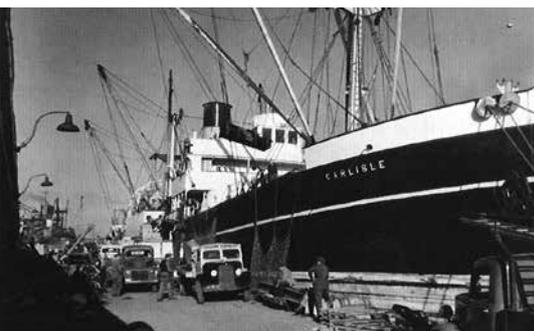
Things seemed to settle down after a few years, and I found myself living the growth of the container trade and moving to head office as Operations Manager - European Trade, thence Exports Manager New South Wales, Commercial Manager - Japan Trade, Trade Manager - Asian Trades and finally to Brisbane in early 1982, to become Queensland State Manager of OCL. This became P&O Containers in 1986, when P&O bought out the remaining two partners B&C and Ocean (Holts/Blue Funnel).

With the joint venture between P&O Containers and Nedlloyd Lines of Holland, in 1997 I was close to retirement and took a redundancy. For the next two years my wife and I travelled. We climbed in the backblocks of Nepal's Annapurna Mountains and trekked into Machu Pichu in Peru. Then in 2000, with the retirement of Col Casey, I was asked to take over as SAL Queensland Secretary, where I stayed until handing the baton to Geoff Dalgliesh in 2018.

So, I have been there to see the transition from conventional shipping to containers and more recently, consolidation of the lines and the demise of vessel discussion agreements. My shipping career commenced when British commercial shipping virtually ruled the waves and concluded when there were few to be seen.

Massive costs, competition and the need for modernisation to meet the challenge of containerisation, brought together four great shipping companies in 1965 to create OCL, today they are again one. In 1986, P&O became sole owners of OCL and acquired ACTA in 1991. In 1997 P&O and OCL merged with Nedlloyd, and in 2005 Maersk acquired P&O Nedlloyd. The pioneering McLeans business, also ultimately finished up in the hands of Maersk. Selling Sea-Land to Reynolds Tobacco Co in 1969 for \$US 530.00 million, which was acquired by Maersk in 1999.

The efficiency and scheduling predictability of container shipping has yielded massive cost and operational advantages over the conventional form, and it had to happen. Labour savings have been immense and berth utilisation improved beyond measure. The result is that international shipping is the one service that is cheaper now than it was 50 years ago. ▲



The Carlisle discharging at Melbourne Wharf

Images: Celebrating 100 years – Patrick



Marking 50 years of container ships in Australia

By Dr STEPHEN GAPPS, curator, Australian National Maritime Museum

In March this year, the 50th anniversary of a moment that changed the face of Australian shipping, ports - and indeed modern Australian life - occurred without a great deal of fanfare.

In 1969 the introduction of purpose built, cellular container ships on the Europe to Australia trade had a huge impact on both port infrastructure and the nature of work – greater than the change from sail to steam. In March of that year, containerisation began in Australia on a regular basis with the arrival of the MV *Encounter Bay*, a purpose-built container ship with a capacity of 1,572 Twenty Foot Equivalent Units of containers (TEU's). While this is not a jot on the current giant ships able to carry nearly 10,000 units, the *Encounter Bay* nonetheless was part of a revolution in shipping as it replaced two similar sized conventional vessels on the UK-Australia service.

In the 1960s many shipping companies formed consortia to ease the financial burden of the changeover from cargo handling to containers. *Encounter Bay* was part of the OCL (Overseas Containers Limited) company, formed in 1969 by four British companies: British and Commonwealth Shipping, Furness Withy, P&O and the Ocean Steamship Company. Between 1969 and 1970 OCL took delivery of its first ships, a fleet of six vessels of 27,000 gross register tons (GRT) and 1,900 TEU capacity, for the UK-Europe to Australia route. The service was inaugurated on 6 March 1969 by *Encounter Bay* undertaking its maiden voyage, arriving in Fremantle later that month.

OCL overcame heavy losses in the first years of operations to become one of the world's leading container lines. By 1982 OCL was Europe's largest container through transport operator, with a fleet of twenty container ships and more than 60,000 container units. It served more than 50 major ports and, in 1980, transported more than a quarter of a million container loads of import and export cargo on a



Encounter Bay

Image: Shipspotting.com

route network linking locations over four continents.

One company, P&O, gradually increased its share of the consortium until, in 1986, it bought the remaining 53 per cent held by Ocean Transport and Trading and British & Commonwealth. On 1 January 1987, the name OCL ceased to exist, the operation becoming known as P&O Containers Ltd (P&OCL). In 1996 P&O Containers merged with Nedlloyd to form P&O Nedlloyd. August 2005 saw the completion of a buyout of P&O Nedlloyd by the AP Moller-Maersk Group, and in February 2006 the name Maersk Line was adopted for the combined fleets.

Although everyone knows what a shipping container is, they don't often think about how central these standardised steel boxes are to people's lives, transporting most of the everyday items we see in our homes and we use and see around us.

More than fifty years since the massive expansion of shipping containers, the Australian National Maritime Museum's

Container - the box that changed the world exhibition looks at the history of containerisation, as well its massive impact and future sustainability.

After opening at the museum in Sydney in October 2017, the exhibition has travelled to Wollongong and Wagga Wagga, and over 200,000 visitors have explored the exhibition about containerisation that is itself made from colourful shipping containers.

The exhibition will open to the public in Narrabri on 17 May 2019, on the lawns of the Narrabri Region Visitor Information Centre, 117 Tibbereena Street, closing 29 July 2019 before it travels to Dubbo, in August.

The major sponsor NSW Ports played a key role in the development of this exhibition. Sponsors are the ACFS Port Logistics, Maritime Container Services, DP World Australia and Smit Lamnalco. Supporters are Transport for NSW and Shipping Australia, with containers supplied by Royal Wolf. ▲



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 Engineering



Unpackaged wine shipments get bulkier

By ANDREAS CLARK, chief executive officer, Wine Australia

Since it was last reported in the Autumn/Winter 2016 Shipping Australia Limited edition, the proportion of Australian wine production exported annually has risen to 63 per cent, a 13 per cent increase in Australian wine exports, led by unpackaged wine.

Australian wine exports

In the twelve months to December 2018, Australian wine exports increased by 10 per cent in value to \$2.82 billion free on board (FOB) and 5 per cent in volume to 850 million litres (94 million nine litre case equivalents). The average value of exported wine increased by 5 per cent to \$3.32 per litre FOB.

The split between packaged and unpackaged wine exports has been changing over time, with the volume of unpackaged overtaking packaged back in 2011. In 2018, unpackaged wine represented 56 per cent of total exports at 479 million litres. Ten years ago, it represented 25 per cent of total exports at 176 million litres.

In 2018, unpackaged exports experienced outstanding growth compared to 2017, reaching record levels in both volume and value.

The value of unpackaged exports of wine increased by 27 per cent in value to \$560 million and 12 per cent in volume to 480 million litres. The average value of unpackaged exports continued to grow, increasing by 14 per cent to \$1.17 per litre.

Shipments of unpackaged wine were delivered to 30 destinations around the world in 2018. The top five included the United Kingdom, the United States, mainland China, Canada and Germany. Four of these markets all experienced growth, while Germany experienced a decline of 5.6 per cent in volume.

Packaged wine exports increased by 7 per cent in value to \$2.26 billion and decreased in volume by three per cent to 370 million litres. This resulted in an unprecedented growth rate in the average value of packaged wine, which grew by 10 per cent to a

record level of \$6.12 per litre.

A large global wine harvest in 2018, economic uncertainty and static consumption are putting downward pressure on world bulk wine prices as Australia wraps up this year's vintage. Australian wine prices are holding up thanks to strong demand and a favourable exchange rate, but international competition is likely to increase in the medium term, as supply pressures ease.

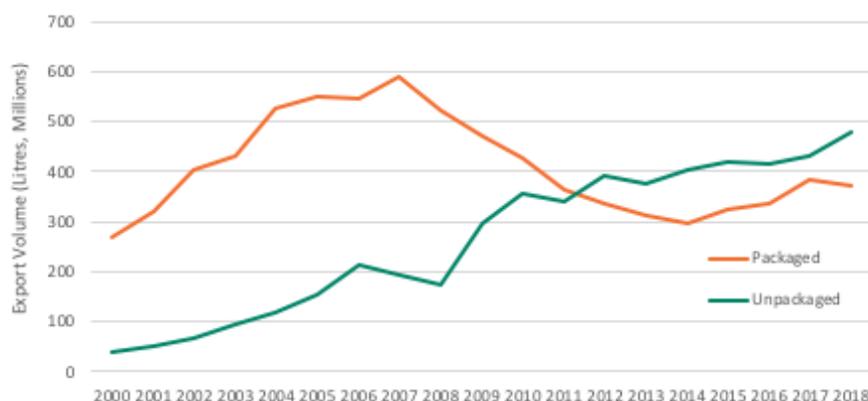
Shipment departures

With nearly all (99.8 per cent) of Australia's wine exports transported via ship to 128 destinations in 2018, the total amount of wine shipped was 847 million litres, or 2.3 million litres per day. The value of these shipments was \$ 2.79 billion FOB. The remaining 0.2 per cent of exports were sent via air transport. This dependency on shipping transport continues to highlight the vital partnership between the shipping industry and the Australian wine community.

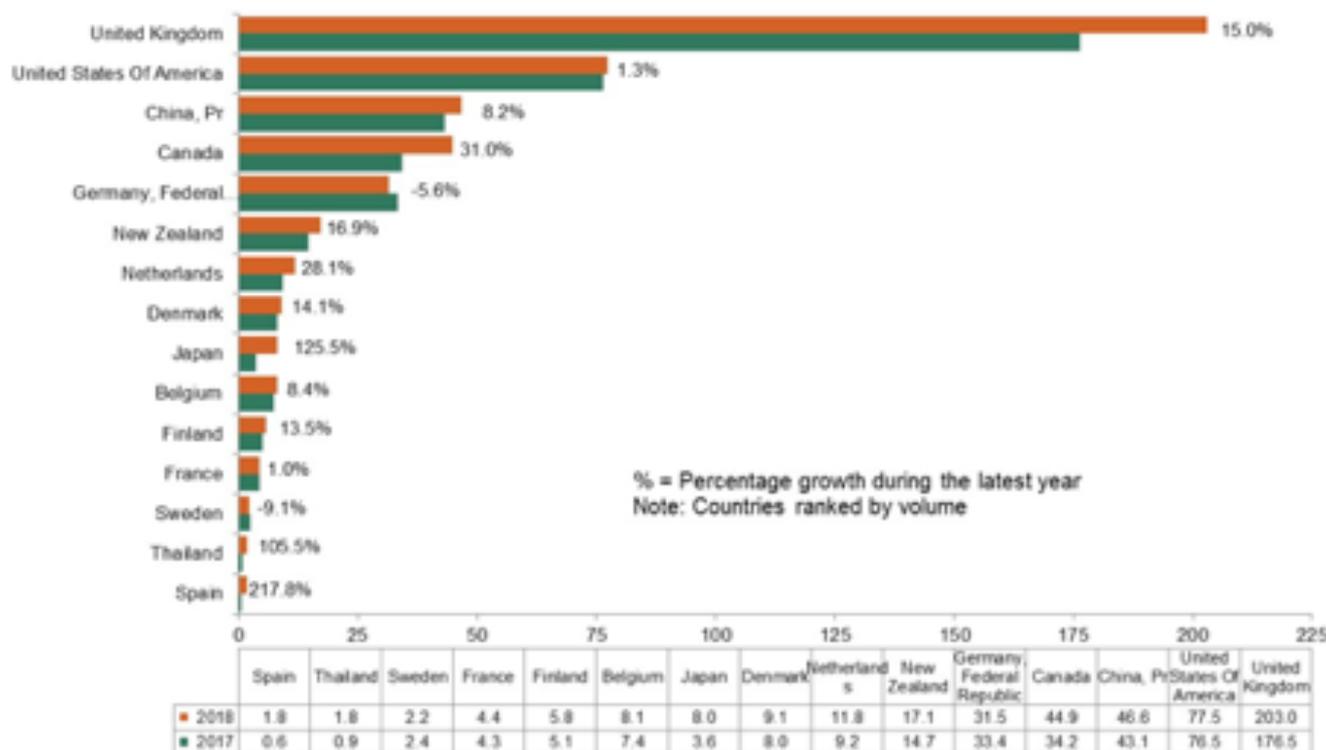
Port Adelaide remains the largest port of loading for wine exports representing 65 per cent of wine shipments sent overseas. Compared to 2018, volume grew by 3 per cent on 2017 to 552 million litres. Port Melbourne represented a third (33 per cent) of wine exports in 2018, with volume shipped also growing, up by 9 per cent to 281 million litres.

Overall, there were 56,000 shipment departures in 2018, up by 5 per cent on 2016, equating to 4,708

Packaged and unpackaged Australian wine exports



Unpackaged export volume (million litres) by top 15 destinations for year ending December 2018



shipments on average each month, from more than 2,500 active exporters. There were 1,747 companies that contributed to the growth in exports, by either increasing their level of exports or commencing export. These companies contributed \$500 million to the overall growth in exports. There were also 1,286 exporters who either decreased their level of exports or stopped exporting in the past 12 months. These companies offset the growth in exports by \$238 million.

Throughout the year, shipment departures tend to be relatively stable with December, January and April generally the softer months.

Wine Australia continues to issue new licenses to exporters each year and these have also increased, up from 652 new licenses in 2016 to 978 in 2018. Around 69 per cent of new licenses issued in 2018 were used to export in the same year.

Wine export destinations

Australian exports to nearly every region of the world grew in 2018. Exports to North America are starting to level out after being in decline for more than 12 months.

The volume of exports to:

- Northeast Asia grew by 9 per cent to 194 million litres
- North America held steady at 235 million litres

- Europe grew by 5 per cent to 356 million litres
- Southeast Asia grew by 6 per cent to 19.7 million litres
- Oceania grew by 10 per cent to 35 million litres, and
- the Middle East grew by 12 per cent to five million litres

China

Exports to mainland China continued to show strong, sustainable growth in 2018. The value of exports increased by 22 per cent to \$1.03 billion, while volume increased by 8 per cent to 164 million litres. The average value increased by 14 per cent to \$6.30 per litre FOB.

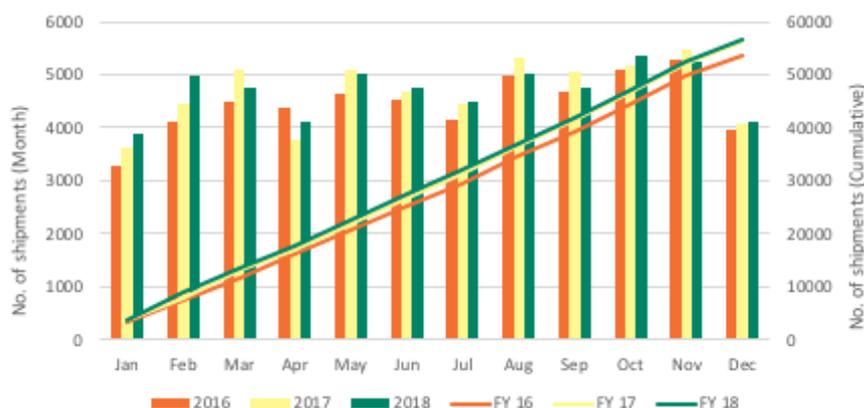
There has been a marked slowdown in total imports of all goods into China; import growth was 3 per cent in the year ended November 2018, the slowest rate since October 2016 (Reuters). The driving factor is an easing in demand, due to a slowing economy and unstable trade conditions.

Just less than a third (28 per cent) of wine exported to China is unpackaged and this proportion has been rising over the years. In 2018, unpackaged exports to China increased by 7 per cent in volume to 46 million litres. Packaged exports also increased by 7 per cent to 117 million litres.

Although the value of year-on-year growth is smaller than in 2017, the

Shipment departures

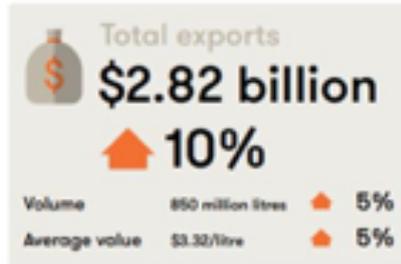
Source: Wine Australia's Wine Export Approvals system



Wine Australia

Export report

1 Jan 2018 to 31 Dec 2018



absolute growth of \$176 million is still more than the total value of shipments to Singapore, Japan and South Korea combined.

USA

In the year ended December 2018, exports to the USA declined by 5 per cent in value to \$425 million and 7 per cent in volume to 161 million litres. As the volume decline outpaced value decline, average value increased by 1 per cent to \$2.64 per litre FOB.

However, there were signs of the decline easing at the end of the year. In the last quarter of 2018, value increased by 1 per cent compared to the same quarter in 2017. While this shift may be small, the most recent trend is a contrast to the negative quarterly growth rates at the start of 2018.

Packaged wine shipments to the USA declined by 13 per cent in volume to 83 million litres in the year ended December 2018, while unpackaged exports increased by 1 per cent to 77 million litres. This was driven by a few large companies that have shifted to bottling in market, rather than in Australia. The split between packaged and unpackaged wine is now around 50:50.

Canada

Australian wine exports to Canada increased by 12 per cent in value to \$210 million, the highest value since 2011. Volume increased by 19 per cent to 74

million litres, a record level. Average value decreased by 5 per cent to \$2.84 per litre FOB.

A record amount of unpackaged wine shipments drove the growth, increasing by 30 per cent to 45 million litres. In the past year, unpackaged wine shipments have moved from having a 55 per cent volume share of exports to a 61 per cent share. Double digit growth in the volume of unpackaged shipments to Quebec and British Columbia is driving this trend.

Packaged wine shipments also increased, growing by 4 per cent to 29 million litres.

United Kingdom

In the year ended December 2018, Australian wine exports to the UK increased by 12 per cent to \$389 million, the highest value since 2013. Volume also increased, by 10 per cent to 246 million litres, solidifying the UK's position as the number one destination by volume.

Unpackaged wine drove overall growth, increasing by 15 per cent to 203 million litres. The average value per litre of unpackaged wine also increased, by 10 per cent to \$1.06. Many larger brands bottle in the UK for domestic consumption, or for shipment to other European countries. This growth of shipments to the UK is largely due to producers getting their product into market before trade regulations potentially get more difficult to navigate,

as Brexit continues to loom past its scheduled date.

Packaged exports to the UK decreased by 9 per cent to 43 million litres. This was mainly driven by some brands shifting to bottling in market.

Japan

In 2018, the third year since the Japan–Australia Economic Partnership Agreement (JAEPA) came into force, exports to Japan increased by 17 per cent in value to \$55 million and 31 per cent in volume to 18 million litres. In the past 12 months, Japan has overtaken both Germany and Malaysia to become Australia's eighth-largest destination by value.

Exports of unpackaged wine increased in volume, up by 126 per cent to 8 million litres, while packaged declined by 4 per cent to 9.5 million litres. Under JAEPA, the tariff on unpackaged wine was immediately cut to zero and this has contributed to a shift in the volume share of unpackaged wine from 27 per cent to 46 per cent in the past 12 months. The tariff on bottled wine will reduce to zero by 2022; it is currently 5.6 per cent. While the volume of packaged wine shipments decreased in 2018, the value increased by 7 per cent to \$46 million, resulting in an increase in the average value for packaged wine of 11 per cent to \$4.83 per litre FOB. ▲

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EVERYTHING
TO DO WITH
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THERE
TO ASSIST
YOU.



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- | Cargo Hold & Tank Cleanliness (AQIS Accredited)
- | In-stow and Wharf Surveys for Steel Products
- | Cargo Gauging and Securing Surveys
- | ISM/ISO-Internal Audits
- | Flag state Inspections
- | Expert Witness to local Courts.
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OPINION

The new Biosecurity Levy – smoke and mirrors, lies or spin?

By ROD NAIRN

This new tax as proposed is unfair, wrongly targeted and highly inefficient. It should be withdrawn, or at least redesigned.

Shipping Australia Limited is just one of many industry groups that are angry that the Federal Government will not take biosecurity seriously and is trying to double tax the shipping and import industries. This new tax makes imported goods more expensive for all Australians, and potentially eats into our export earnings too.

Strong biosecurity is essential for Australia. It supports our economy by protecting our agricultural industries and export earnings from destructive invasive pests. It protects our comfort, lifestyle, gardens and homes.

Biosecurity is part of our national security. It is a public good that benefits all Australians. The Government adequately funds Defence, border security and cybersecurity. It should also adequately fund biosecurity.

Biosecurity is a shared responsibility between government and industry. The services provided are already cost recovered from industry.

The shipping and the import industries already pay a substantial price. They pay for:

- pre-treatment of cargo;
- ballast water treatment systems;
- offshore cleaning of the external parts of containers;
- hull cleaning to reduce biofouling;
- the cost of processing import applications;
- a vessel arrival fee, and

• the full cost of any inspections required at the border and any subsequent cargo treatments.

Included in the current vessel arrival fee is \$110 to subsidise the management of domestic ballast water, even though very few international vessels transfer ballast water domestically, most don't even sail a domestic leg between Australian ports.

Was that spin or a lie?

In the 2018 Budget the Federal Government announced a new Biosecurity Levy that claimed to be aimed at improving strategic biosecurity.

In that budget the Government announced \$313 million of biosecurity funding over six years, yet the forward estimates confirm that the Coalition Government would continue to reduce appropriation funding to the biosecurity function of the Department of Agriculture, just not by as much as they had foreshadowed in the previous (2017) budget.

In fact, the \$252 million appropriated to biosecurity (Outcome 2 in the Department of Agriculture portfolio Budget Statements) this year is less than it was in 2012 (\$285 million) and

will continue to fall to \$217 million in 2020-21, according to the forward estimates (all figures in 2018 dollars).

Call it smoke and mirrors, lies or call it spin. Since 2012 the Federal Government has harvested nearly \$300 million from the biosecurity budget and is now using biosecurity as an excuse for a new tax to prop up consolidated revenue.

The Government cited the IGAB report of 2017¹ as justification for the new Biosecurity Levy, but the proposed levy is not consistent with that report.

The implementation is similarly flawed. They have not developed a regulatory impact statement. They have not consulted effectively with all affected industry sectors, and over the past ten months the proposed target industries, costs and collection methods have changed continuously, so that everything is confused.

In fact, the IGAB report points out that government appropriations to the Department of Agriculture “have declined since 2001 and were offset by an even larger increase in ‘externally’ sourced funds”. These

¹ *Priorities for Australia's biosecurity system, An Independent Review of the Capacity of the National Biosecurity System and its Underpinning Intergovernmental Agreement - Wendy Craik, David Palmer and Richard Sheldrake - 2017*

'externally' sourced funds are levies and cost recovery from industry. In fact, the report found that at the Australian Government level "over 70 per cent of total biosecurity-related expenditure funded [was] by industry in 2015–16".

In simple terms, industry is paying its share, but the Government is not.

The whole Biosecurity Levy concept is unfair, ill-considered and inefficient – if it goes ahead, it will cost everyday Australians much more than the \$9 per annum that each tax paying Australian would pay if the Government continued to adequately budget fund strategic biosecurity.

Former Minister for Agriculture, David Littleproud's statement, released on 24 February, is the smokescreen to cover the lie. In that statement he said "It makes sense that those who create risk should contribute proportionately to our biosecurity screening".

He failed to mention that the shipping and import industries already pay for all the biosecurity services they use. He failed to mention that the reason that the new Biosecurity Levy was introduced was to make up for the shortfall after the Government had siphoned more than \$250 million from budget funding for biosecurity, over the previous five years.

He failed to mention that the new tax must be passed on to ordinary Australian consumers. And that the proposed new tax is so inefficient, due to the additional administrative charges added down through the supply chain, that ordinary Australians will pay at least twice, and perhaps three or four times as much as the Government will collect through the tax.

His statement, "If the taxpayer is burdened with all the costs of biosecurity, then importers will never take their part of the responsibility of keeping Australia free from pests seriously", implied that industry is not playing its part. We find this offensive.

The fact is that industry has been working hard to play its part over the past 20 years, and bearing more of the costs of protecting Australia's biosecurity. The fact is that IGAB review found that industry already bears 70 per cent of that cost!

It is the Government that has failed to play its part, by reducing appropriation funding to biosecurity during a period of increasing trade and risk?

The Australian people don't expect the Government to withdraw funding from biosecurity. The shipping and import industries don't accept the transfer of more of the cost burden at a time when industry is already facing massively increased biosecurity compliance costs, such as for Brown Marmorated Stink Bugs.

A lot of the biosecurity compliance costs faced by industry are due to poorly considered biosecurity policy decisions and lack of strategic foresight. This also needs to be fixed.

Now is the time the Government should be increasing appropriation funding to the Department of Agriculture, to enable better analysis and policy development, to protect Australia in times of increased trade and biosecurity threat.

The shipping and import industries support strong, effective biosecurity for Australia, but we can't deliver without sound biosecurity policy.

Biosecurity is a shared responsibility, industry is paying its way, but the Federal Government needs to do its part and restore the budget appropriations funding that it has stripped from the Department of Agriculture, across the forward estimates.

In November 2018, the Federal Minister for Agriculture signed a joint statement, together with all State and Territory counterparts, agreeing most of the recommendations of the IGAB report, including "to maintain biosecurity funding at 2017 levels". Yet his Government had already reduced appropriation funding to biosecurity throughout the forward estimates.

In the pre-election 2019 Budget, the Government announced a delayed start date of 1 September for the new Biosecurity Levy, this was inevitable. The design of the levy is not yet decided. In a scramble to quell

increasingly vocal industry objections prior to the election, the Minister created a special committee to review the design.

Tightly constrained by its terms of reference, the Minister's special committee is currently trying to work out how the Government's target revenue of \$108 million per year can be apportioned relative to biosecurity risk, and collected with the least possible impact on the import industry and Australian consumers. Sounds like an impossible task. The report is due to be handed to the Minister on 1 June.

What is very disappointing is that the Government decided to retain the levy in the pre-election Budget, when it could have been cancelled without a significant impact on the bottom line. We heard lots of spending promises in the election campaign – I wonder how the shipping and import industries can be further screwed to make up the unfunded \$500 million announced to guarantee mortgages for first home buyers?

Here is the real failure. The new Biosecurity Levy, if it can be implemented, will not deliver new money to protect Australia's biosecurity. As it currently appears, this levy doesn't increase the Government's commitment to biosecurity. It will simply bolster the Federal Budget with a new tax on industry, which is so inefficient that it will cost ordinary Australia many times more than the revenue returned to the Government.

Biosecurity is just as important to Australia as Defence, border security and cybersecurity. These are all 'public good' services that benefit every Australian. They all should be adequately funded by Government. It would be far more efficient and far less costly for every Australian if the Federal Government met their funding obligations for biosecurity from their normal taxation revenue. ▲

Following the May Federal election the Hon Bridget McKenzie MP replaced David Littleproud as Minister for Agriculture and will consider the special committee's report in June.

THE *Golf* SCENE



SAL Queensland Golf Day - Bond's Transport shines

The 2019 annual SAL Queensland Golf Day was held at Wynnum Golf Course, on 22 May. 92 players took to the course and had a very enjoyable day!

The standard was high, with a stunning score of 51 from overall winners, Bond's Transport's - Matt Lake, Ben Quigley, Tom Ditchburn and Matt Thompson. In second spot on 55 points (on a countback), was MCC Marine's - Roger Weiller, Nick Bradley, Jason Hare and Peter Murday. Svitzer rounded out the top three for Chairman's Trophy, with Jeff Hircock, Anthony Shaw, Geoff Hardicott and Steve Baker.

Other winners: Bradman's Prize - Thynne + Macartney and Torres Pilots; Nearest the Pins - Ben Quigley, Ken Jackson x 2, David Goss and Geoff Hardicott;

Longest Drive - Roger Weiller, and Straightest Drive - Steve Cox; Two approach shots - Matthew Lake and Nicholas Bradley.

Thanks to our sponsor's, without them this day would not happen: Hamburg Sud, OOCL, BMP, Svitzer, Torres Pilots as our Trophy and Prize Sponsor's.

Qube Logistics and PBPL for Drinks Cart sponsors. Holes sponsorship, thanks to PBPL, Brisbane Port Launches, Patrick Stevedore's, MCC Marine, Hamburg Sud, Hapag Lloyd, Yang Ming, Qube Ports, Ace Waste, Smit Lamnalco, DP World, Thynne + Macartney, AAL, ES Randle, CPA Group, Svitzer and BBC Chartering.

Special thanks to Gary Sue See for photos and general organising, from Registration right through to final Scores and aiding in Trophy presentations.

Thanks for the excellent support Wynnum Golf Club - we'll see you again next year!

SAL Queensland Golf Day competitors



Overall winners of SAL Cup - 1st prize sponsored by Hamburg Sud and SAL



OOCL Dennis Bryant Cup - 2nd prize



Chairman's Trophy - 3rd Prize sponsored by Brisbane Marine Pilots

Collinson Forex takes the honours at SAL New South Wales Golf Day

The annual SAL New South Wales Golf Day, held at the Coast Golf Club on Wednesday 13 March, was a great success. The forecast rain held off until near the end of the event and there was a good attendance. Players were rewarded with spectacular views of the coast and ocean.

There was some excellent play in a very tight competition with the first three teams only separated by half a point!

A big congratulations to the Collinson Forex team (pictured below), headed up by John Collinson who, despite being the lowest handicap team (7), finished the day as our 2019 winners. Their class had them coming in 16 under the card, with 56 points from 63 strokes.

Seaway (Todd Sams), also on 56 points, were placed second on a count back with 65 strokes. Third placed team were Patrick (Ashley Dinning) with 56.5 points. A very close finish!

We're sure that it will be a tough contest again next year!

The longest drive was won by Todd Sams (13th hole) from Seaway, and the nearest the pin prizes were won by Kris Kennedy from Smit Lamnalco (4th hole) and Steve Moxey from On-Time Publications (8th hole).

The day finished with a sumptuous buffet and drinks at the 19th hole.

Many thanks to our fabulous hole sponsors, whose generous support made a great day possible – Asiaworld Shipping, Evergreen Line, QUBE Logistics, Smit Lamnalco, SWIFT Transport, Seaway and SVITZER. QUBE Logistics and Svitzer also donated prizes.

The professional team at The Coast Course ensured that a great day was had by all.



Ben Moke DP World team



James Kurz PAE team



Chris Ryan Port of Melbourne team



Peter Creams Svitzer team



Euan McCowan Neptune Pacific Line team

Rod Begley, Victorian State chairman Shipping Australia, passes the Phil Kelly OAM trophy to Tony Nelson from Westlink Container Park



SAL Victoria Golf Day

Sixty of shippings finest golf talent were assembled at Waterford Valley Golf Course on Wednesday 3 April in 23-26 degree temperatures, to contest the Phil Kelly OAM Perpetual Trophy.

The winning team was Leigh Taylors Westlink Container Park entry. The two longest drives sponsored by Total Maritime Logistics and Total Maritime Forwarding, were won respectively by Ben Moke from DP World and Tom Hill from Port of Melbourne's team. Tom additionally won closest to the pin, sponsored by Pacific Asia Express, providing evidence a lower centre of gravity coupled to a broad set of shoulders provides an unfair advantage in the game!

A big thankyou goes to our Gold Sponsor Svitzer, Key Silver Sponsor Port of Melbourne for the winner's prize, DP World's supply of Titleist golf balls and Neptune Pacific's hydration from affiliate Fiji Water. Also, our thanks to both Don Forsdyke and David Wittenburg for their supervision of the course, with photographic duties added this year.

The date for next year's challenge has been fixed for Wednesday 18 March 2020 (save the date). A special thanks must be extended to Waterford Valley Golf Club who were fully accommodating of our requirements and ensured a highly successful day.



2019 Golf Day Winners

Getting planning right, and the National Freight and Supply Chain Strategy on track

By A SPECIAL CORRESPONDENT

The Australian Logistics Council (ALC) works with Government at all levels, to ensure it considers the needs of the logistics industry in its investments and policy decisions, representing the major Australian logistics supply chain customers, providers, infrastructure owners and suppliers. ALC focuses its advocacy efforts on the three key areas of safety, infrastructure and regulation, and technology, with the aim of improving supply chain efficiency.

The 2019 ALC Forum is a key part of the consultation process. This year's forum was held at the Melbourne Cricket Ground from 5 -7 March. The forum brought together over 300 representatives from all sectors of the transport and logistics network – delegates and speakers from industry and Government, including Federal and State ministers, chief executive officers, public sector leaders and senior purchasing, freight, logistics and supply chain managers. The hallowed turf of the MCG provided a fitting backdrop.

As in recent years, the diverse programme was jam packed, though the Welcome Reception gave delegates the opportunity to view the many trade exhibits, and the Annual Dinner on 6 March, following the first day of presentations, provided an enjoyable social interlude.

This year the ALC sported a new leadership team for the event with ALC chairman, Philip Davies, who assumed the role on 14 January, welcoming industry representatives and introducing Kirk Coningham OAM, the newly appointed CEO, to get proceedings underway.



Hon Melissa Horne, Victorian Minister for Ports and Freight

The Hon Melissa Horne MP, Victorian Minister for Ports and Freight, delivered the opening keynote address. She noted that 80 per cent of inbound maritime freight has a destination within 20 kilometres of the port, and highlighted several initiatives, including a new freight terminal to be located at the markets behind Swanson Dock, and progress on the new interstate rail terminal.

The Shadow Minister for Infrastructure, Transport, Cities and Regional

Development, the Hon Anthony Albanese MP also spoke on day one. He highlighted his long-term credentials and record of achievement in the Transport and Infrastructure portfolio and outlined the Labor policy to establish a Strategic Fleet with the intent to secure Australia's fuel security. During questions, Shipping Australia's CEO Rod Nairn, opined that Australia's fuel security would be better served by ensuring a broad spread of supply lines from different sources and utilising a variety of flags, rather than putting Australia's fuel supply into the hands of a known militant union. Mr Albanese's response recognised the advantages of multiple sources then focused on his wish to see the Australian flag among the mix of vessels carrying Australia's fuel supplies.



Hon Anthony Albanese MP, Shadow Minister for Infrastructure, Transport, Cities and Regional Development



ALC chief executive officer, Kirk Coningham

Panel discussions were utilised with good effect to examine challenging and topical matters during this conference. During day one a series of expert panels examined topics including: putting freight on the ballot; preparing our workforce for digital transformation; getting infrastructure investment right; driving supply chain safety; enhancing port efficiency in Australia; and a national rail vision.

The conference dinner provided an opportunity for delegates to unpack proceedings with speakers and fellow delegates. Michael Brennan, chair of the Productivity Commission spoke about the structure of our economy shifting and the associated problems with concentration of the population, with forecasts that two thirds of our population will be in four cities by 2061, creating big challenges for logistics planning into the future.



Speakers for the 'Facing North: Making northern Australia's potential a reality' session, included: Tania Constable, Minerals Council of Australia; Malcolm Roberts, Australian Petroleum and Exploration Association, Ross Baynes, NT Airports; Maria James, Port of Townsville, and Nicholas Fertin, North Queensland and Bulk Ports



Hon Michael McCormack, Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development

The Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development, the Hon Michael McCormack MP, provided the keynote on day two and outlined the Government's priorities for infrastructure investment guided by the National Freight and Supply Chain Strategy. Significantly, he stated that "good progress is being made in partnership with all levels of Government and it will be a key item of discussion at the COAG Transport and Infrastructure Ministerial Council Meeting".

Panel discussions were again a feature of day two. This was the first time that the ALC Forum has included sessions dedicated to development of Northern Australia and the use of electric vehicles in the Australian supply chain. These new subject areas helped to broaden the discussion and allowed participants to consider emerging opportunities for the industry. Other topics included: urban and regional freight planning; the National Freight and Supply Chain

Strategy, how freight data will enhance safety, and pricing and efficiency.

Perhaps the most contentious session of the Forum was that covering the proposed Biosecurity imports levy, which was held after lunch on the second day. The Departmental position was bravely put forward by Ms Josephene Ladusko but industry representatives: Mike Gallacher, Ports Australia; Duncan Sheppard, Australian Railway Association; Rod Nairn, Shipping Australia; Teresa Lloyd, Maritime Industry Australia and Paul Zalai, Freight Trade Alliance, were all ready to highlight critical faults ranging from concept, through justification, and consultation, to proposed outcome. The industry representatives were united in the opinion that the levy needed to go back to the drawing board. It is not surprising that after such strong industry criticism, that Minister Littleproud took the step to appoint an industry committee of experts to review the planned levy implementation.

Many Government and industry leaders from all sections of the supply and logistics network spoke on behalf of their sectors, chaired discussion sessions, engaged and explored robust discussion to establish this year's key actions.

While it is hard to confirm agreed outcomes from such a diverse group of Forum participants there was certainly general agreement on some key action areas including:

- Defending the industry against being used as a 'cash cow' through the imposition of poorly-designed levies and charges;
- Leveraging bipartisan support for the National Freight and Supply Chain Strategy to ensure its release in 2019;

- Pursuing a National Corridor Protection Strategy;
- Working to move more freight by rail;
- Pursuing opportunities for shipping to share in a growing freight task by ensuring that ports are able to operate efficiently;
- Continuing to advocate for the greater uptake of electric vehicles in the freight sector;
- Utilising Northern Australia's potential;
- Building a sustainable workforce for the industry by aligning skills training programs to future needs;
- Greater policy certainty to attract investors; and
- Harmonising regulatory requirements around freight movement across jurisdictional boundaries, recognising that a national economy is underpinned by a national supply chain.

With the Federal Election looming it was significant that bipartisan commitment to delivering a National Freight and Supply Chain Strategy was reaffirmed by the Federal Government and Opposition at the Forum. This position was also supported by State and Territory representatives.

ALC CEO, Kirk Coningham, stressed, "The first priority for whichever party wins on 18 May must be to work with State and Territory governments to finalise and implement action plans that will ensure the Strategy delivers for industry."

With the demonstrated high levels of collaboration between all parties, it is looking promising that the National Freight and Supply Chain Strategy will be delivered later this year, as promised and ON TIME. ▲



Global markets and the impact on currencies

By PAUL BETTANY, Foreign Exchange partner, Collison & Co.

Global equities have rebounded strongly in 2019, after a major correction in the final quarter of 2018. The correction was triggered by tightening monetary conditions and escalating global trade wars. The Trump administration has the world's largest economy in overdrive and have used the opportunity to leverage international trade agreements. The Administration has adopted a bi-lateral and balanced attitude to international trade and has been working to ensure FTA's are both free and fair. The global trade wars consuming Asia, Europe and North America have been the result. This has prompted speculation that trade wars will trigger global economic growth prospects and damage the 'supply chain'.

The US and renegotiated trade agreements

The Trump Administration has adopted a bi-lateral approach to trade with the world's largest economy. The US economy is still largely domestic (more than 70 per cent) while trade (exports and imports) account for only approximately one third of the economy. This has allowed the US to turbo-charge the domestic economy, through tax cuts and deregulation, to support rapid economic growth and position them in a strong place to re-negotiate existing trade agreements. The trade imbalance was massive, with China, Europe, Mexico and others, all operating massive trade surpluses. President Trump's strong economic position has enabled him to negotiate from a position of strength, which seems to be succeeding.

The North American Free Trade Agreement has been renegotiated with Canada and Mexico, forcing a more balanced and fair-trade agreement on all partners. The Europeans have made verbal agreements to a more balanced and fair-trade policy. The big one is China. The Chinese have become the factory of the world and operated as an emerging nation, despite

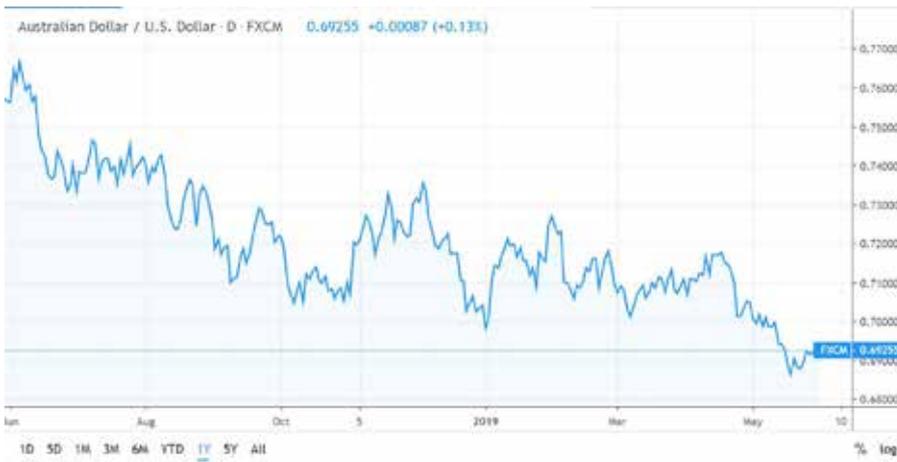
becoming the second biggest economy in the world, utilising all the advantages of that preferred trading status. The Chinese have been posting trade surpluses with the US of over \$500 billion per annum. Trump has said: Enough! This has upset the status quo and threatened the existing supply chain. China is being dragged, kicking and screaming, to the table and there are high hopes of a successful outcome by the middle of 2019. This achievement would green-light global economies, who have operated under a dark cloud, during these extended trade wars. Falling victim to this disruption has been commodity countries, their economies and currencies.

Global economies and their central banks

Global economic growth has suffered, outside of the USA, which has led to extremely loose monetary policy. Since the Global Financial Crises, central banks around the world have maintained excessively, expansive liquidity in their monetary systems. This has led to historically low interest rates and massive accumulations of national deficit and debt. The Federal Reserve began to raise interest rates over the last cycle, in recognition of

the strong performance and growth in the US economy. This brake on investment, acted in conjunction with the trade-war fallout, to trigger the collapse in markets in the final quarter of 2018. It was this downturn that was addressed by the Federal Reserve, reversing their 'hawkish' stance on monetary policy, after extreme pressure from the Trump administration and collapsing markets. The Fed has returned to a 'dovish' monetary policy, joining most other central banks, globally. The reduced pressure on interest rates has allowed investment and growth to return to markets and in particular, the US.

At home, the RBA has acted accordingly and maintained historically low interest rates, while recently soft growth data may suggest that interest rates may even be cut further anon. This has directly impacted the currency, with the AUD falling to critical support levels around 0.7000, which is towards the bottom of the historical trading range. The currency prospects are not great, with the RBA looking to continue their record low rates, for the foreseeable future. The US economy is likely to remain strong throughout the current calendar year, and thus the US Dollar will be well supported.



AUD/USD currency chart

Source: www.tradingview.com

Geo-political events

The biggest events in the global economy over the coming few months, will be international trade agreements and, more particularly, between the US/China. It is likely, that if this is successfully concluded in the near future, it will boost global economic growth. This will then lead directly into further bi-lateral trade agreements between the US and

Japan, South Korea and Europe. The conclusion of these agreements will offer certainty in global markets, which will respond positively.

The Brexit chaos continues to plague markets across the EU and more particularly, Britain. The Tory Party will be punished electorally, unless they can pull this out of the fire. It will require a change in leadership from within the Conservative Party and/or

the Parliament itself, as the current representatives do not represent the people who elected them and voted in the referendum. A solution will likely boost the GBP although the EURO will remain challenged. The Australian Federal election will be influential in markets, and any move towards Labor, will impact on equities and the currency, in a negative way.

Central banks are likely to extend generous liquidity, which should ensure investment is more certain. The fight over monetary policy will determine the relative strengths in currencies, which determine the balance and competitiveness of trade between countries. Australian companies dependent on the trade sector, need to be keenly aware of these currency moves, to protect margins and profitability. Accurate foreign currency cash-flow projections must be an integral part of business planning and the key to success. Managing the currency risk through traditional Foreign Exchange instruments is an integral part of 'risk management'. ▲

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Throw another sea cucumber on the barbie

By TIM HARCOURT*

The sea cucumber is a marine animal that has a leathery skin but soft body. Its shape and size resemble a cucumber. In Australia, we commonly call it trepang, adopted from a Malayan word. It was Australia's first export to Asia, where it is regarded as a delicacy, particularly in Chinese cuisine.



There is evidence fishermen from Makassar, on what is now the Indonesian island of Sulawesi, were visiting the coast of what is now Arnhem Land to collect sea cucumbers, as early as the mid-1600s to sell to Chinese merchants. The fishermen camped on the beach to boil and dry their caught trepang, and exchanged goods with the local indigenous tribes. Through the lens of trade, therefore, the story of modern Australia, a nation interacting with the global economy, begins long before January 26, 1788.

There are many debates that surround Australia Day. But we can all celebrate our history of trade. Like any history, there are episodes

of engagement we can't admire or be proud of. But on the whole, what began with seafood trade on the coast of Arnhem Land has proven a remarkable success.

Arrivals, departures, department stores

Two of Hong Kong's most iconic department stores provide another example of historic interaction with Asia.

Throughout the 19th century large numbers of Chinese, particularly Cantonese, migrated to Australia's goldfields. As in any gold rush, it was those who ended up selling supplies that usually prospered more than the prospectors (the 19th century

equivalents of Atlassian). In Victoria, Chinese merchants became prominent in the development of retail sectors in Ballarat and Bendigo.

Some Chinese migrants who opened stores in Australia eventually returned to China, and took what they had learned with them.

One of those was Ma Ying Piu, who in 1900 opened Hong Kong's first Chinese-owned department store, called Sincere. The store is said to have been inspired by David Jones in Sydney.

Hong Kong's second Chinese-owned department store, Wing On, was started by brothers Kwok Lok and Kwok Chuen, who returned to China from Australia in 1907. Both businesses opened branches in Shanghai and became two of the four great department stores of China.

Such entrepreneurial spirit from around the world enabled the separate Australian colonies to boom for much of the 19th century. Admittedly some paid a heavy price (convicts and indigenous people treated like slaves, for example). But great economic growth was achieved, as economic historian Ian McLean points out in *Why Australia Prospered*, without a national government or "many of the institutions and sources of advice now regarded as essential for macroeconomic management", such as trained economists.

The long march to the Asian century

Colonial governments ran trade missions to China, South East Asia and Japan in the 19th century. After Federation in 1901, the Commonwealth Government set up trade offices in Shanghai, Tokyo and Batavia (Jakarta) before the interruption of World War II. In the post-war era there have been "four waves" of Asian engagement.

The first three were: the Japan-Australia Commerce agreement in 1957; Gough Whitlam's recognition of China in 1971, and the Hawke-Keating economic reforms between 1983 and 1996.

The fourth wave is the Asian Century. It began after Australia survived the Asian Financial Crisis of 1997-99 and realised its future did lie in Asia.

To get to that point was a long process. Paul Keating might have been the prime minister who most enthusiastically spruiked engagement with Asia, but he was certainly not the first to advocate closer ties.



Balarinji oversaw translating Emily Kame Kngwarreye's 1991 painting 'Yam Dreaming' for application on a Qantas jet.

That was then, and this is now

So that's some of our history. What about now?

There are many contemporary things we can be cheerful (and proud about) in 2019 that echo our history.

We can be very pleased about successful indigenous exporters and entrepreneurs – the successors of our first traders from Arnhem Land.

Think of Ros and John Moriarty of Balarinji, the design agency that has developed all of the motifs used by Qantas in its Flying Art series.

Or Peter Cooley, who founded Blak Markets to provide economic development opportunities to indigenous people. (He also hosts his own business show.)

Or David Williams and the members of the Bangarra Dance Theatre.

At my business school at the University of NSW a new generation of indigenous business students have just completed summer school. I am hopeful many will become our business stars of tomorrow.

Along with homegrown talent, Australia has been blessed by waves of immigrants rich in the same entrepreneurial spirit that enabled Chinese merchants to prosper, despite the racism of the 19th century.

From the first fleet, we've had English, Scots and Irish seeking freedom from poverty and persecution. We've had East European Jews, Vietnamese

Buddhists, Lebanese Christians and Afghan Muslims fleeing persecution and war.

About one in four Australians were born overseas, but they represent one in every two exporters, and two out of every three entrepreneurs. Immigration has been a good story for Australia in terms of trade and entrepreneurial talent.

The books *Why Nations Fail* and *Why Australia Prospered* show Australia has developed much more successful economic institutions (such as property rights) and political institutions (such as democratic rights) than other nations with similar natural resources, agricultural endowments and increases in human capital through immigration.

This is partially due to our successful record as a trading nation.

No nation is perfect. They all have their failures and aspects of their history not to be proud of. But the things we have gotten right are worth remembering.

So even if you throw a shrimp on the barbie, at least remember the sea cucumber. ▲

* Tim Harcourt is the JW Neville Fellow in Economics at UNSW Business School and author of *The Airport Economist*



Infrastructure plans must include cruise

By JOEL KATZ, managing director, Cruise Lines International Association

Cruise industry growth has dropped to just 0.9 per cent thanks to infrastructure constraints in Australia's main gateway port. It's time to unblock the Sydney bottleneck.

After a succession of announcements at State and Federal levels, it's clear that big ticket infrastructure projects are high on Australia's political agenda right now.

Billions of dollars have been allocated for developments across the country, particularly for roads and rail upgrades, aimed at increasing our capacity on land.

In this year's Federal Budget, a record \$100 billion was announced for a succession of projects, including the Melbourne-Brisbane inland rail, the Western Sydney Airport and the planned Melbourne Airport rail link. This is in addition to other projects flagged at the State level, including in New South Wales, where concepts such as high-speed regional trains were revealed ahead of the recent State election.

All this investment is welcome, particularly from a travel and tourism perspective. But unlocking Australia's tourism potential involves more than just initiatives on land. The world's cruise lines are investing billions of dollars in more modern and advanced ships, and this needs to be backed with adequate infrastructure that supports Australia's economy at sea.

Cruising's key infrastructure issue in this region remains the lack of available berthing space in Sydney, particularly in peak season. The city's Overseas Passenger Terminal at Circular Quay is operating at full capacity over the summer period, while the White Bay Cruise Terminal is unable to cater to many of the larger ships in the world fleet, which are too tall to pass beneath the Harbour Bridge.

As a result, Sydney is missing out on valuable tourism and supplier opportunities, as cruise lines struggle to secure berthing slots and face difficult decisions on whether to deploy their ships here. The bottleneck is also threatening to limit our industry's prosperity elsewhere in the South Pacific, given Sydney's role as the region's main cruise hub and turnaround port.

The cruise industry has welcomed the New South Wales Government's Cruise Development Plan, and is looking forward to seeing details on its business case for a third Sydney terminal, currently proposed for locations in Port Botany. But while this progress is promising, we are still some way from achieving the solution that the cruise industry has been seeking in Sydney for over a decade.

In the meantime, cruise lines are looking at alternative means of capturing demand in the Australian market. In 2018, a total of 1.35 million Australians took an ocean cruise, representing 5.8 per cent of the population. That gives us the highest market penetration rate of any major established cruise market in the world, well above other countries like the US, UK and Germany.

But while Australia's total passenger contribution hit an all-time high last year, it was only 0.9 per cent above the previous year and came as a stark contrast to the decades of double-digit growth that had come before. In short, growth has almost stalled because of the Sydney bottleneck.

Other indicators suggest Australia's appetite for cruising is still strong, including good growth in fly-cruise options in other parts of the world, which were up 3.4 per cent in 2018. This gives the industry confidence that growth will again accelerate once developments, like the new Brisbane International Cruise terminal, come online. Some cruise lines will then be able to increase their operations from Queensland, while others are opting for newer and larger vessels to make better use of existing berthing slots in Sydney. Growth may remain weak throughout 2019, but we hope to see better results from 2020-21 onwards.

Meanwhile, across the Tasman, similar capacity issues have been a hot topic in Auckland, whose main cruise facility, Queens Wharf, is unable to cater to ships larger than 294 metres. This means an

increasing number of ships in the world's fleet must either bypass the city or ferry their passengers ashore aboard tender boats, in a complex and less-than-ideal process for a gateway city. Like Sydney, Auckland's constraints have the potential to impact other destinations around the country, but a recent decision to approve the installation of two dolphin mooring points at Queens Wharf will provide welcome relief until a more permanent solution can be developed. With the New Zealand cruise market achieving 14.6 per cent growth in 2018 – amongst the highest levels in the world – it's clear the need for investment in infrastructure will remain an important topic there too.

The cruise industry is currently worth almost \$5 billion annually to Australia, making it more than deserving of further investment and support. The level of political will that has coalesced around other areas of transport, tourism and infrastructure therefore needs to be applied to the cruise economy as well.

All levels of government – national, State and regional – need to develop a united focus on solving the infrastructure issues that limit the cruise industry, and to commit to funding that will help unlock new growth, economic opportunities and job creation. With a common approach – not just in Sydney but across Australia and New Zealand – we will be able to fully capitalise on continuing global growth in cruising and the scores of new ships set to join the world fleet in coming years.

With the number of cruise passengers worldwide set to break the 30 million barrier this year, not to mention the extraordinary potential in emerging markets in close proximity to Australia and New Zealand, the opportunities that cruising presents for the local economies are immense. The key will be in achieving the same degree of political support we're now seeing for other parts of the tourism and transport sectors. ▲

Increase productivity

Reduce incidents

Working on a vessel can be extremely high-risk, with seafarers reportedly up to 27.8 times more likely to suffer work-related fatal injuries compared to the general shore-based workforce.

A recent study uncovered new insights into seafarer safety and wellbeing and found that looking after your crew results in less incidents and better productivity.



Manage fatigue

One in five seafarers experience acute and chronic fatigue. Implement a fatigue risk management system to manage fatigue and ensure crew get enough sleep.



Rules and procedures

Make sure rules and procedures are clear, practical and up-to-date. When information is easy to understand and relevant, crew are more likely to follow rules and procedures. Including seafarers in the development of rules and procedures improves compliance, performance and wellbeing.



Work demands and support

Seafarers are required to quickly switch between monotonous tasks and extremely demanding tasks. Buffer the negative effects of these work demands by promoting positive and open interaction between crew and people in higher-level roles. As the leader, set high safety standards and show your crew that their safety is just as important as operational cost.



Co-worker support

Crew that have emotional support and are equipped to deal with work pressures perform better. Employing the same crew on the same vessel helps by allowing them to develop support networks and enjoy job security. These things increase wellbeing and reduce the rate of mental health issues.

The final report *Assessing the determinants and consequences of safety culture in the maritime industry* is available at amsa.gov.au



Australian Government

Australian Maritime Safety Authority

amsa.gov.au



Does Australia need a merchant shipping fleet?

By THE AUSTRALIAN STRATEGIC POLICY INSTITUTE*

If elected to Government, the Labor Party says it will enhance Australia's economic sovereignty and national security by creating a strategic merchant shipping fleet. As a first step, it will appoint a taskforce to guide the establishment of the 'strategic fleet', which is likely to comprise up to a dozen vessels, including oil tankers, container ships and gas carriers. The Australian-flagged and -crewed vessels will be privately owned and operate on a commercial basis but could be requisitioned by Government in times of need.

In addition to creating the strategic fleet, Labor plans to address skills shortages in the Australian maritime sector by re-establishing the Maritime Workforce Development Forum, which was abolished by the Coalition, after it took office in 2013.

The arguments that Australia needs a merchant fleet for reasons of national security and to provide a domestic source of skilled Australian seafarers have some validity. Shipping is also economically efficient in terms of fuel costs, carbon emissions and reduced congestion on the roads.

Domestic freight in Australia (other than some bulk cargoes) mainly goes by road and rail—except across Bass Strait, and in northern Australia, where most freight goes by sea because of a lack of land transport infrastructure. According to data from the Bureau of Infrastructure, Transport and Resource Economics (BITRE), rail transport accounts for approximately 49 per cent of total domestic freight by volume (iron ore and coal moving from mines to a port constitutes about 80 per cent of this), road freight makes up about 35 per cent of total freight, and coastal sea freight 17 per cent. Over the 13 years from 2000–2001 to 2011–12, coastal sea freight actually declined, while road freight increased by

nearly 50 per cent. Most coastal sea freight is carried by foreign-flagged ships operating with coastal trading licences issued by the Australian Government.

Trying to get more interstate and intrastate cargo back to sea is sensible, but that hasn't happened for several reasons: road transport provides better door-to-door movement; road transport doesn't pay its true costs of using the roads; large integrated transport companies have a lot of government influence; and Australian industry has argued strongly against the risks of increased costs.

Europe has faced a similar dilemma but, with increased road congestion and high highway tolls that put more of the true costs onto road trucking, a trend has emerged of more trucks and containers being moved by sea ('short sea shipping') where sea transport is an alternative to land transport. Special types of dedicated truck ferries and container or ro-ro (roll-on/roll-off) ships have emerged for this trade.

There could be scope for a similar move back to sea transport in Australia, particularly if the true costs of road transport were factored in. Also, the type of container/ro-ro ship that's used might be suitable

for the Defence Force's transport requirements in an emergency situation.

The debate over the need for Australian-flagged merchant ships has a long history, running right back to Federation. Over the years, there have been many Government inquiries and much research into the issue, most notably the comprehensive Crawford Report on the revitalisation of Australian shipping in the early 1980s.

These inquiries have invariably come back to the simple fact that Australian-flagged ships with Australian crews cost more than foreign-crewed vessels. Even when reviews have recommended new financial incentives or regulation changes to help build an Australian merchant navy, successive governments haven't followed through on those proposals.

The two large container/ro-ro ships, *Tasmanian Achiever II* and *Victorian Reliance II*, currently entering service with Toll Shipping for the Bass Strait trade, are the largest cargo ships on the Australian ship registers. They are broadly similar to the container/ro-ro ships employed around Europe. Such vessels would also be suitable for moving freight by sea elsewhere around Australia, especially over

longer routes, such as Perth to Sydney or Melbourne to North Queensland.

The only other large vessels on the Australian ship registers are the four LNG carriers employed on the gas trade between northwest Australia and Asia, some floating protection and storage operations vessels employed in the offshore oil and gas industry, and a few other special-purpose vessels, such as the *Aurora Australis*, the Antarctic research and supply ship.

The Australian ship registers currently comprise the general register and the Australian International Shipping Register (AISR). The latter was established about six years ago to provide a competitive registration alternative for Australian ship owners and operators that engage primarily in international trade. Registration on the AISR provides access to income tax exemptions and other tax incentives and allows the use of mixed Australian and foreign crews.

Oil tankers and gas carriers are basic national security requirements

for the assured movement of fuels around the coast in times of national emergency. There's little ability to transfer fuel around Australia other than by ship. It would take over 1,000 truck movements to shift the same volume of fuel carried by one medium-sized tanker. In addition to several foreign-flagged oil tankers, two small foreign-flagged gas carriers are currently employed on the Australian coast.

Our military bases and airfields in northern Australia would be heavily dependent on fuel imports by sea in any conflict situation. All fuel for the country's north is currently imported from Asia, and that itself is a major strategic vulnerability for Australia.

There are no oil tankers (except for small in-port bunkering tankers) currently on the Australian registers. In comparison, New Zealand has two large coastal tankers for moving oil around the country. A sound national security argument can be made for moving some tankers and coastal gas carriers onto the Australian

register—something which could be encouraged through the use of Government subsidies.

Bringing some oil tankers and gas carriers back onto the Australian register, with Australian crews, could be the first move in Labor's plan to establish a strategic fleet. The proposed taskforce could then investigate the feasibility of using Australian-flagged and -crewed container/ro-ro ships to move more domestic freight back to sea. Using Australian-flagged and -crewed ships for general international trade, as opposed to those on the AISR, would likely remain economically unattractive. ▲

**Editors Note*

This article was first published on 4 March 2019 on The Strategist, the blog for the Australian Strategic Policy Institute. Despite being published before the 2019 Federal Election, it remains relevant to future shipping policy.



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Chain of Responsibility reducing Australian trucking annual death toll

By JIM WILSON

Australian trucking continues to prove fatally dangerous to drivers, and to bystanders too, according to the latest statistics from Safe Work Australia, a statutory entity, set up to advise on a variety of workplace health and safety matters.

In the run-up to Christmas 2018, the body released its report, "Work-related traumatic injury fatalities Australia 2017," which makes for grim reading.

There were 190 workers who were fatally injured at work in Australia in 2017, which gives a fatality rate of 1.5 workers per 100,000 workers. By way of comparison, the Australian transport-sector recorded fatality rate is 8.6 deaths per 100,000 workers. That's 5.7 times greater than the Australian national average. There were 54 deaths in the 'transport, postal and warehousing' sector, which accounts for 28 per cent of all worker-deaths in 2017, according to Safe Work Australia. Sixty-three per cent (119 of the 190 fatalities) were related to vehicles of various descriptions.

"Road transport's large share of fatalities is not due to industry size, but due to [a] disproportionately high fatality rate..." Safe Work Australia commented, adding that Australian road transport is a high risk industry.

Road transport risk factors

Risk factors include drivers feeling pressured to go fast and skip breaks, the nature of shift work and fatigue.

Tara O'Connell, the general manager of Australian workplace health and safety consulting company, Labour Health, shared her insights with FreightWaves about the nature of trucking-related collisions and fatalities in Australia.

"Most collisions take place overnight, involving long distances. Drivers veer off," she said, pointing out that drivers have few places to stop. There can be few really restful truck stops on certain routes where drivers can get out of their cabs, walk around and be properly stimulated, she explained.

"Given we are on a big island and most products are imported and then transported by road, there should be better resources for drivers. But who's going to pay?" she asked.

O'Connell stated that fatigue is an issue. "It counts for so much."

In addition to the issues surrounding rest stops, or the lack thereof, she points to patterns of employment as being a safety risk factor. She says that there is a pattern of casual employment in the Australian trucking industry. Such drivers typically are paid minimum rates under the Road Transport (Long Distance Operations) Award 2010, which, for the purpose of this article, can be thought of as an Australian industry-wide basic contract that sets out minimum standards. Casual truckers working for minimum pay while on limited hours have an economic incentive to find work elsewhere, either working for other trucking companies or, these days, driving for Uber.

And while fleet managers can control the hours their employees can work, they can't control employees who are moonlighting.

"They're turning up fatigued," said O'Connell.

She pointed out that distances driven by truckers around Australia are "vast" and that highways can be in a poor condition because of floods, general adverse weather and cyclones. Roads can have potholes, damage to the surface and poor road markings, among other things. "The Bruce Highway is known for being in a poor condition," she added.

The Bruce Highway is a "major north-south freight and commuter corridor." It connects the state capital, Brisbane, to Cairns in the far north of Queensland – a distance of 1,677 kilometres, according to the Queensland Department of Transport.

Other vehicle-related deaths

Safe Work Australia also reports that there were 11 people killed after being hit by a

moving object that was either a truck, semi-trailer, lorry, car, stationwagon, van or utility vehicle. There were also a variety of other deaths from non-truck mobile equipment (e.g. self-propelled machinery). A further two people died after falling from trucks, semitrailers or lorries.

There were 19 people killed in collisions involving a heavy vehicle and three who died after a collision with a light vehicle. Ten people died in collisions between at least two heavy vehicles and six people died in collisions involving a mix of heavy and light vehicles.

There were also 41 members of the general public (bystanders) who died after being hit by a vehicle that was being used for work-purposes.

Long-term trends

Over a five year period (2013-2017) there were 177 road freight transport related deaths in Australia.

There were 137 deaths from vehicle collisions, 14 from being hit by moving objects and 8 from being hit by falling objects. O'Connell suggests that the deaths from being hit by moving or falling objects could be associated with falling loads that were not properly secured in the truck.

Further analysis of those deaths shows that 149 people were killed in a vehicle-related incident either driving / moving freight or people. A further 10 people died either loading or unloading freight to or from a vehicle. There were also 14 road freight-related deaths in which no vehicle was involved; two of those deaths involved loading or unloading of freight.

Declining death rates

Although these figures are tragic, it is clear that the numbers of road-related deaths is trending downwards. The death-rate (all industries) hit a peak of 3.0 deaths per 100,000 workers in both 2004 and 2007. Since then the death rate has steadily declined by half to 1.5 deaths per 100,000 workers.

O'Connell explains why. "The rates are coming down because there has been a concerted effort by the road transport industry. There has been a big focus on drug-reduction usage. The health and well-being programmes of, for example, Toll and Linfox, are second to none."

She also pointed to the Chain of Responsibility laws as being a factor in helping Australian trucking to become safer, along with more strict enforcement of rest breaks and days off. ▲



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Delivering a connected supply chain – one move at a time

By SHERIDAN JONES, head of corporate affairs, LINX Cargo Care Group

LINX Cargo Care Group (LINX CCG) brings together the capabilities of five market-leading operations built on over 100 years of port and logistics experience. Together, LINX, Autocare, C3, Pedersen and GeelongPort employs more than 4,000 highly-skilled professionals in over 70 sites across Australia and New Zealand. The Group services a diverse range of industries right across the region, from agriculture, oil and gas, aluminum and automotive to marine, mining and resources, food and beverage and forestry. Every year, the LINX Cargo Care group of companies handles more than 22.5 million tonnes of bulk cargo, almost two million tonnes of steel and more than 20.5 million tonnes of forestry products.

The LINX Group of brands (excluding Pedersen) emerged following the separation from Patrick and the Asciano group of companies, over 2.5 years ago in August 2016 - the organisation and its people continue a legacy built on more than 100 years of ports and logistics experience.

Group CEO, Anthony Jones, is enthusiastic about 2019 – a future filled with opportunity.

“We entered 2019 with a clear business strategy, full of investment and growth, which is very exciting and positive for everyone at LINX Cargo Care Group. Our business continues to establish itself

in the marketplace and LINX CCG is gaining a reputation as a reliable Group of companies that customers want to do business with.

Anthony says the future looks bright as the company continues to expand its intermodal business a key focus. “One year ago we acquired the Enfield Rail Terminal in Sydney. We’re aggressively expanding our rail business and we’ll continue to do so. We are a mode-agnostic transport provider, operating across road rail and sea. This diversity in modal offering allows us to offer our customers the right solution every time.

Enfield is a key part of our business strategy, directly aligned to the New South Wales Government and NSW Ports’ strategy of moving more import/export volume to Port Botany by rail. Enfield’s service offering will decongest main arterial roads of Sydney, by getting trucks off the road around Port Botany and putting freight on to trains. Enfield is closer to distribution centers in western Sydney, which is a priority for the supply chain and logistics industry, Government and community.

Located close to Sydney’s major M4 and M5 motorways, with a dedicated freight line to Port Botany and direct access to the interstate mainline corridor, the Enfield Intermodal Logistics Centre (ILC) includes the intermodal terminal, warehousing and buildings, with vacant land for the development of rail-related warehousing, freight forwarding, IMEX (Import and Export), transport and distribution facilities.

The Enfield Intermodal Terminal is a 15.1 hectare leasehold from NSW Ports, with terminal capacity of 300,000 TEU annually.

Infrastructure New South Wales forecasts truck traffic at Port Botany will increase

by 400 per cent by 2030, largely driven by expected growth in freight volumes.

Container movements through Port Botany are forecast to increase from two million TEU (Twenty-foot Equivalent Units) in 2011 to seven million in 2031, creating a bottle-neck through the existing rail line and road network, out of the port.

The port shuttle service LINX operates between Enfield and Port Botany, will reduce traffic congestion in Sydney by taking freight off roads and moving it by rail from the port to the major freight precinct in Sydney’s west.

“Given the forecast for such a significant increase in road and rail congestion across Sydney over the next decade or so, LINX is committed to working closely with the New South Wales State Government to develop an effective and achievable solution which will reduce the impact of increased freight movements across the city,” Mr Jones said.

The announcement, in November 2018 from NSW Ports, of the Governments investment of the duplication of rail lines into Port Botany, will not only increase rail capacity but also drive efficiency in container movements. This all a huge benefit for LINX, and its customers.

LINX runs daily services into all the stevedores at Port Botany, there are sub-tenants on the terminal site and LINX recently signed up ACFS as the empty container park operator. While throughput is strong, Enfield continues to grow.

“On the import supply chain, Enfield is strategically positioned to service the main import freight catchments in north west, western and inner west areas of Sydney. On the export supply chain, Enfield is also strategically positioned to service all of the rural export catchment



trains, thanks to its location on the intersection of all rural and metro train lines,” Jones says.

LINX is looking to continue its ongoing investment into other cities, including Kenwick Intermodal terminal (KIT) in Western Australia.

Located with direct RAV7 (36.5m) truck access from Roe Highway, the planned KIT is part of Perth’s best-connected Logistics Park. With a dedicated freight line to the North Quay Rail Terminal (NQRT) and access to the interstate mainline corridor, KIT offers exporters and importers throughout Western Australia, seamless and efficient supply chain solutions. LINX KIT offers a dedicated port rail shuttle service, a freight hub to connect metro and regional business areas to port rail shuttle service and a dedicated empty container park service offering.

LINX KIT is strategically positioned to service the freight catchments throughout WA into NQRT, with the additional ability to receive and dispatch via approved RAV 7 truck access routes.

LINX has a clear vision to deliver a connected supply chain, one move at a time. “We collaborate with our key stakeholders, customers and exporters to build terminals and offer integrated

services which improve supply chain connectivity, and drive efficient and safe solutions - where our customers go, we go,” Anthony Jones emphasises.

“We’ve got a very strong balance sheet behind us with our investors, so we need to be strategic and rational about how we invest to ensure we don’t just continue to grow aimlessly. If you grow too quickly you can start to wobble. For me, it’s about making sure that when we acquire something, we integrate it properly, before moving on to the next thing.

“I’m extremely proud of where we are and the team that we have – I have great, capable people and my success is only because of those I have around me. I’m really excited to see where the next two or three years will take our organisation. I firmly believe people will continue to connect and engage with our brand, so watch this space,” Jones says.

“We recognise that the skills of our workforce, together with their diverse thinking, is a huge opportunity to continually transform our business and the industry, over the next 10-15 years. To remain agile and nimble in an ever-changing market, workforce capabilities and attitudes need to change and evolve, and employees need to keep up

with the technological advancements and new ways of working to ensure we are responsive to our customers’ needs.

“The biggest transformation in the workplace today is, without a doubt, the increasing adoption of technology,” he says. “And we are at the centre of it. This transformation has been painful for many. However, rather than technology being a threat, the addition of automation across our industry will likely create new jobs and opportunities, as new technologies make processes faster, safer and more efficient – and as a result, the logistics market will grow, along with its workforce.”

“We believe our future business success is heavily reliant on how well we understand our customers – how well we adapt to new technologies – and how well we recruit, engage, develop and manage people with different backgrounds and thinking styles. By leveraging the experience and ideas of our people and embracing different viewpoints, we gain a better understanding of our diverse customer base, and ultimately, this enables greater innovation and the realisation of our future vision,” Jones concluded. ▲



Port of Townsville trucks on through historic flood event

By RANEE CROSBY, chief executive officer, Port of Townsville

The recent flood disaster in North and Central Queensland showcased the agility and flexibility of customers and operators at the Port of Townsville to keep trade moving amidst a critical rail-line catastrophe. A number of port customers had to quickly shift their commodities from rail to road and mobilise trucks and drivers from all around Australia. It was a logistical wonder resulting in an additional 100 heavy trucks per day in the flood's immediate aftermath. "The flood completely took out the Mount Isa rail line between Cloncurry and Hughenden," says Drew Penny, Port of Townsville, general manager of Operations. "So most of the commodities that normally come to the port by rail had to be moved to road transport."

These commodities included fertiliser, lead ingots and mineral concentrate. Mr Penny says a big part of the port's ability to continue operating through the flood and its aftermath, was due to the Port Access Road. "The roads north, south and west were all blocked but the Port Access Road, despite running close to the coast, didn't go under."

The Port Access Road, completed in 2010, is one of the few major roads in Queensland that permits 53.5 metre long triple road trains that can carry in excess of 85 tonnes of product. The large carrying capacity of this road was essential to keep the extra trucks moving. "It just goes to show the importance of forward planning of infrastructure projects," Mr Penny says. "We heard one of our customers refer to the Port Access Road as 'Townsville's unofficial highway' and I think that's pretty accurate."

Transport was a concern for port customers and local residents, with the flood inundating roads and vehicles alike. A local car dealership, which imports 90 per cent of its stock through the Port of Townsville, experienced a 30 per cent increase



Trucks at security

in sales as a direct result of the flood. Mike Blucher, Mike Carney Toyota general manager, says clients who lost a vehicle in the flood required the replacement urgently. "The reported write-off estimates for vehicles have been into the thousands, so it's a great advantage for us to have Townsville as the first port of call for new cars imported from Japan and Thailand."

As well as an increased demand for new vehicles, the region has seen demand increase for fuel to supply the rail-to-road conversions. Distributors linked to the port community reported a double in diesel sales along the North West Minerals Province. A major fuel importer experienced an almost 15 per cent rise in fuel sales across the north Queensland region in March and April.

Mr Penny says the port's ability to work through the flood and accommodate the changes in trade and transport conditions was down to communication. "Both during and after the flood, we've been talking to our clients and offering every assistance we can."

The port remained operational during the flood event and open for emergency supplies. "We had a skeleton crew on site through the worst of it," Mr Penny says. "We actually had a mineral concentrate ship alongside the entire time. It loaded during gaps in the rain. When the water levels started to fall on 5 February, we had a fuel tanker, container vessel, and two bulk commodity vessels working."

The port saw some rail product coming back on line in March, with Incitec Pivot building a temporary rail loading facility in Richmond. "Regular contact with port customers was the key, so we could be flexible and accommodate both the extra truck movement and some products coming in by rail," says Mr Penny. "In April we started to see a drop to around 50-60 extra trucks a day. All of our customers were problem solving to get their products to the port, so we've had to be ready and prepared for all scenarios."



Port Access Road

The February flood was the worst in North Queensland's recorded history, with a slow-moving monsoon dumping 20 times the average rainfall for the time of year, over the Townsville region. The region is still recovering from this catastrophic weather event that brought some parts of the region to a stand-still.

Handling around \$8 billion worth of trade each year, the ability of the Port of Townsville to remain operational is vital for supporting the economic recovery of the region.

And the response by customers and operators along the supply chain was

exceptional. The recovery effort by Queensland Rail to get the Mount Isa Rail Line back up and running has been nothing short of remarkable, particularly considering the scale and extent of damage.

This flood event certainly created major logistical challenges, but the strength and resilience of operators across the supply chain shone through. Our customers and logistics operators worked tirelessly, in the midst of dealing with the floods impacting their own homes and those of families and friends, to keep vital products moving in and out of the region. ▲

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Bigger containerships require a big rethink on Australian port planning

By CRAIG CARMODY, chief executive officer, Port of Newcastle

Australia is the fifth largest maritime freight task in the world, with 98 per cent of its trade travelling by sea. It pays to be aware of and responsive to global trends.

Global container trade has grown by 8.1 per cent per annum since 1980¹. Australia's volumes are projected to keep growing. As the number of containers moved grows, so too has the size of the vessels built to carry them.

According to BIMCO², containerships on order for delivery this year include 19 Ultra Large Container Vessels (ULCVs) with capacity for 19,000 TEUs or more and a further 30 containerships of 11,800 to 15,300 TEU. These vessels are becoming the new workhorses of global shipping.

Yet BIMCO finds there are no ships on order with capacity between 3,621 and 11,800 TEUs.

That should sound alarm bells in Australia where our East Coast container ports are accustomed to handling container ships of about 5,000 TEUs and put out a media release any time they welcome anything with capacity over 8,000 TEU. We need to urgently accept the fact we are being left behind.

The cost benefits of ULCVs of 15,000 TEU and above – replacing up to three conventional container ships and steeply reducing slot costs – put pressure on ports to respond.

For the supply chain savings to be made, ports must be able to handle these large vessels and, most importantly, efficiently.

Ports in Europe, East Asia and the United States have responded, upsizing their infrastructure to service these larger

vessels. Whether deepening or widening their channels or building longer quay lines and installing more or larger quay cranes, ports around the world have reacted. The Ports of New Jersey and New York spent US\$1.7 billion³ raising the Bayonne Bridge specifically so they could fit Ultra Large ships into their container docks. That takes foresight and policy decisions outside of the port precinct.

HoustonKemp Economists prepared a report – *Containerised trade trends and implications for Australian ports* – in January 2019 that points to three key factors in servicing bigger ships. The first is the high cost of creating and then maintaining channel depth. The second is that wharf side investment needs to occur to ensure the infrastructure can withstand the stresses of larger volumes. Bigger ships require larger and heavier equipment, especially with increased automation. The third factor is on the landside, with an emphasis on integrated and uncongested access to the national rail and heavy vehicle road networks. HoustonKemp emphasises the need for longer rail sidings, ease of access to intermodal facilities and the benefits of trains longer than 1.2 kilometres. The clear finding is that ports will be more competitive and deliver the greatest economic benefits when the sum of these costs is lowest compared to an alternative capacity expansion.

A large part of efficiently servicing ULCVs is on the land. Automation and reliance on rail is critical for such efficiency to be achieved. Unfortunately, Australian ports rely on trucks to shift the overwhelming majority of their containers⁴. Ports will have a hard time convincing metropolitan residents that growth is good when it results in a continued over-reliance on trucks rumbling down suburban streets.

Australia's ports have a variety of challenges related to channel depth and

width, crane lifting capacity and outreach, proximity to rail and sub-optimal train lengths. We can choose to respond to the challenge of bigger ships or actively ignore it. A recent claim that container ships of 10,000 TEUs are “decades away” from Australia certainly stands out in an environment where ports around the world are responding quickly to the challenge. Considering the Port of Tauranga in New Zealand already services container ships of up to 11,500 TEUs, the future is already in our region.

It is not just an issue of competitiveness, but also Australia's ability to comply with international shipping laws and regulations. Australia has long had a voice at the International Maritime Organisation. That comes with clear obligations. The IMO's 2020 regulations on sulphur dioxide from bunker fuel will have ramifications for Australia. Most of the older, smaller ships visiting our ports burn this bunker fuel.

Fixing these ships is so expensive that the shipping lines might reasonably consider scrapping the older vessels or pay the penalties levied against them – which likely get passed on to Australian businesses. Some international ports will decide to ban the sulphur-emitting ships altogether.

Either way, Australia's trade performance is in trouble by relying on the older, smaller, dirtier and less efficient vessels. The slot price will be higher for importers and exporters compared to our global competitors.

The ULCVs are not a novelty; not when almost half of newbuild capacity is in this category. ULCVs are the way we will trade, creating significant economic benefits for the nation and ensuring compliance with international environmental standards. Of course, this assumes they can access our ports.

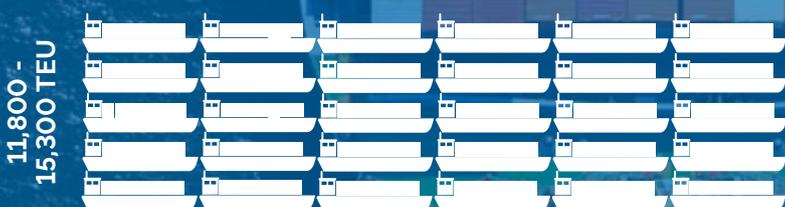
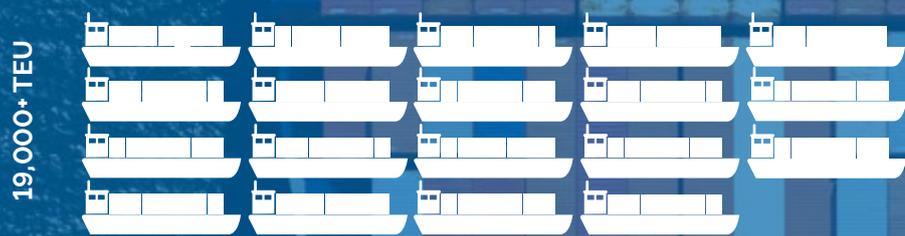
¹ Houston Kemp p. 9

² https://www.bimco.org/news/market_analysis/2019/20190219_2019_01_container_shipping

³ <https://loydslist.maritimeintelligence.informa.com/LL1125743/Port-of-New-York-and-New-Jersey-sees-7-growth>

⁴ Deloitte p. 24

2019 CONTAINER SHIP BUILDS



3,621 -
11,800 TEU

* THIS IS THE SIZE OF ALL INTERNATIONAL
CONTAINER VESSELS ABLE TO BE HANDLED BY
EXISTING AUSTRALIAN PORTS



SOURCE: www.bimco.org/news/market_analysis/2019/20190219_2019_01_container_shipping

Planning for the future

178 new container ships are due to launch in 2019. Of these, 49 are too big to visit Australian container ports. The rest are so small that they are sub-economic for shipping lines servicing Australia.

What is the environmental and economic cost of only catering for older ships at a time when the world is embracing bigger, cleaner and more efficient ships?

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The burden of proof in cargo claims litigation

By STUART HETHERINGTON, partner, Colin Biggers & Paisley

Volcafe Ltd and Others v Cia Sud Americana de Vapores SA (trading as CSAV)

In this decision of the United Kingdom Supreme Court, the Court at the end of last year has overruled the 1894 English Court of Appeal decision in the “*Glendaroch*”, which the leading judgment of Flaux J. in the English Court of Appeal had described as containing the “classic exposition of the burden of proof in cases of carriage of goods by sea at common law before the adoption of the Hague Rules”. The “*Glendaroch*” has been relied upon by many Courts and Judges of great repute in the UK, Australia and elsewhere as forming the foundation for the operation and interpretation of the Hague Rules.

Surprisingly, discussion of this case in the public arena has generally not been critical. The Supreme Court’s decision is regrettable for a number of reasons, but primarily because it applies the principles of bailment rather than contract to the interpretation of exception clauses in bills of lading, and thus:

- ignores how exception clauses in contracts for the carriage of goods by sea and their bill of lading terms have been applied in the UK since at least the 1850s;
- ignores the manner in which the Hague Rules came to be agreed, and their *Travaux Préparatoires*;
- the bailment approach propounded in *Gosse Millard Ltd v Canadian Government*

Merchant Marine Limited, which the Supreme Court has endorsed, ignores the mutuality that the Rules were designed to achieve in the compromises made between carrier and cargo interests; replaces the delicate balance struck by those Rules between ship and cargo with its emphasis on contractual relations, carrying with them different onuses of proof which had been accepted by many courts around the world, including Australia, rather than bailment with its own peculiarities about onus of proof;

- overturns the “*Glendaroch*”, a 125 year old English Court of Appeal decision which has guided lawyers advising their clients as to how such cases will be fought out, essentially, in reliance on a first instance decision, which its author seems to have resiled from subsequently and has been widely criticised;
- asserts that the “*Glendaroch*” has rarely featured in the reasoning of subsequent case law and thus ignores its influence on Australian Courts of high standing, which have applied it;
- may require the now discredited traditional contractual interpretation to be applied when freight forwarders or time charterers, who are not bailees, are sued on bills of lading; and
- is out of step with the Rotterdam Rules.

Facts of the case

The essential facts in this case were

that coffee beans were shipped from Colombia to Germany and suffered condensation damage. The claimed amount was US\$62,500. The containers in which the coffee beans were carried were provided and stuffed with the bags of coffee by the carrier and before stuffing the bare corrugated steel of the containers was lined by the stevedores with Kraft paper. The carrier relied on the defence of inherent vice and exculpatory provisions in the bill of lading. The case pursued by the cargo interests was that the containers were inadequately prepared by the carrier to protect the cargo from condensation during the carriage and such preparation was part of the loading process.

The Australian position

The classic statement of the Australian position is set out in the judgment of Samuels JA in the NSW Court of Appeal in *Gamlen Chemical Co (A/Asia) Pty Ltd v Shipping Corporation of India Limited* (1978) 2 NSWLR 12 (NSW CA) in which the plaintiff’s cargo was shipped in drums from Sydney to Indonesia under a clean bill of lading and had broken adrift from its lashings in the hold during heavy weather. The trial Judge, Yeldham J., had found that one of the causes was heavy weather but the cargo could have been stowed better to meet the weather that was encountered. Hence there were concurrent causes, and he held that it was not necessary for the peril of the sea defence to be the sole cause of the

loss and the carrier was successful. This was overturned by the Court of Appeal, whose decision was upheld in the High Court.

Samuels J.A. wrote the leading judgment in the Court of Appeal, with which Moffitt and Reynolds JJ. agreed. Samuels J.A. considered how articles III and IV should be interpreted, in particular in the light of the *Gosse Millard* and *Albacora* (another House of Lords decision in which criticisms of the *Gosse Millard* were made) decisions. Samuels J.A. said:

“It may very well be, of course, that what was said by Wright J. in the *Gosse Millard* case concerning the onus of proof is inaccurate. The correct sequence of pleading is set out in the “*Glendarroch*” in the judgment of Lord Esher M.R., where his Lordship makes it plain that the plaintiffs must first prove the contract and non-delivery or the delivery in a damaged condition, to which the defendants may plead an exception, leaving it then to the plaintiffs to reply: “there are exceptional circumstances viz that the damage was brought about by the negligence of the defendants’ servants and it seems to me that it is for the plaintiffs to make out that second exception.” And his Lordship re-emphasises that the proper sequence of pleading must follow the burden of proof.”

In the High Court in the *Gamlen* case the leading judgment was given jointly by Mason and Wilson JJ., with whom Aickin and Gibbs JJ. agreed, who responded to Counsel for the shipowner, who had sought to rely on what Lord Pearson had said in the *Albacora*, in saying:

“With respect we think that the appellant misconceives the thrust of the observation of Lord Pearson. The key to the statement is to be found in the phrase “unless he proves absence of negligence on his part”. His Lordship in our opinion is dealing with the question of onus of proof and taking up a position in opposition to the much debated statement of Wright J. in *Gosse Millard*, which is described in one of the texts as “heresy” (Carver Carriage by Sea, 12 ed. Vol 1, par 266A). The point was of no relevance in *Albacora* because as his Lordship observes it was proved



The Viscount Esher
William Brett, 1st Viscount Esher:
Lord Esher MR



The Lord Wright
Robert Wright, Baron Wright

in the case that the shipowner was not negligent: nor is it relevant in this case because it has been proved that the shipowner was negligent. We may say, in passing, that we agree with Samuels J.A. in the Court of Appeal when he points out that the correct sequence of pleading is set out in the judgment of Lord Esher in the “*Glendarroch*”.

In the later High Court decision of *Great China Metal Industries Co Ltd v Malaysian International Shipping Corporation Berhad (The “Bunga Seroja”)* 196 CLR 161, Aust HC, McHugh J. agreed with the reasoning of Mason and Wilson JJ. in *Gamlen*.

McHugh J. discussed the exception for “Perils of the sea” and held that:

“The delivery of the goods in a damaged state is evidence of a breach of Article III and imposes an evidentiary burden on the carrier to show that no breach of Article III has occurred. But unlike the common law, failure to deliver the goods in the state received does not cast a legal onus on the carrier to prove that the state of, or non-delivery of the goods, was not due to the carrier’s fault.”

Rotterdam Rules

The language of the Hague Rules is largely retained in the Rotterdam Rules, but with some significant changes.

The Rotterdam Rules have avoided the expressions which have caused

issues with the Hague Rules, such as “Subject to the provisions of article IV...”; in article 3 rule 2; and “unless caused by the actual fault or privity of the carrier” and “without the actual fault or privity of the carrier” in article 4 rules 2(b) and (q). More significantly, by making it express in article 17 that: it is the claimant that has the burden of proving loss, damage or delay or the event or circumstance that caused or contributed to it took place during the period of the carrier’s responsibility; it is the claimant which has to prove that the carrier was at fault in order to defeat a defence based on one of the excepted circumstances in article 17.3; that it is the claimant that has to prove unseaworthiness. The Rotterdam Rules follow the sequence of “the ordinary course of practice” (to which Lord Esher referred in the “*Glendarroch*”). That practice had been given effect to, at the very least, in the common law world, since at least the mid-nineteenth century in relation to contracts for the carriage of goods by sea where bills of lading and their exception clauses have been in use.

Conclusion

It is unhelpful for the Supreme Court in the UK to seek to import into the conduct of cargo litigation based on the Hague Rules, the principles of bailment when the Hague Rules are predicated on a “contract of carriage covered by a bill of lading” (article 1(a)), which is undertaken by sea

(article 2) and any bailment is upon the terms of that contract, which invariably incorporates the Hague Rules, or a version of them.

It does not appear from close consideration of the cases both before and since the Hague Rules or the *Travaux Préparatoires* that what the Supreme Court has decided was within the contemplation of either the common lawyers or the civil lawyers who drafted the Hague Rules. Furthermore it does not reflect the practice and procedure that had preceded the Hague Rules.

During the 19th century the parties to contracts of carriage determined the terms upon which their liabilities and responsibilities were based and the courts determined their disputes on the basis of their pleadings and in light of the common law. The goods owners would assert the good order and condition of the goods on shipment and either their loss or damage at destination not by reason of any exclusionary event but by negligence, which the carrier would deny and assert reliance on an exclusionary event, to which the goods owner would then reply.

The architecture of cargo limitation was well established before the Hague Rules, in both the practice and procedure which applied in the United Kingdom, and its colonies, before the intervention by statute and international convention.

Lord Esher's decision in the "*Glendarroch*" was based on at least 40 years of cargo litigation in the United Kingdom, involving exceptions to bills of lading which had been adopted by British shipowners, and accepted internationally and then reproduced in part, and constrained in other respects, in the Harter Act and other State legislation, and it is unrealistic to think that the judges who decided those cases were not alive to the duties of bailees.

The Hague Rules were drafted to replicate those statutory provisions in an international instrument.

There was general acceptance in the deliberations that preceded the Hague Rules that each State would apply their own practices and procedures as to how they would be given effect to.

Wright J. was in error in *Gosse*

Millard (and appears to have subsequently moved away from it); Scrutton L.J. cannot be said to have favoured the view that the Hague Rules had drastically altered the status of sea carriers as Lord Sumption has suggested; Lord Sumner, whilst seeming to have accepted Wright J.'s analysis, also seems to have moved away from it, and Lord Atkin has also recognised and accepted the traditional approach.

Many judges of great repute have accepted Lord Esher's statements in the "*Glendarroch*" and not agreed with Wright J.'s approach in *Gosse Millard*. The Rotterdam Rules have largely replicated the common law approach to burden of proof issues, as was originally intended in the Hague Rules.

In any event it should be acknowledged that it will be rare that cases are decided on onus issues, as Flaux J. pointed out in his judgment in the Court of Appeal. ▲

****This is an edited extract of a longer article that is likely to be published in a law journal.***



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Golden Globe wrap - The 50th anniversary re-enactment of the 1968 Sunday Times Golden Globe Race is over

By A SPECIAL CORRESPONDENT

Victory to Frenchman Jean-Luc Van Den Heede, and his Rustler 36 yacht, *Matmut*, in the Golden Globe solo around the world race. He crossed the finish line at Les Sables D'Olonne on 29 January 2019, setting a record time of 211 days, 23 hours, 12 minutes and 19 seconds.

Montissier avenged, Sir Robin's Knox Johnson's record vanquished.

Seventeen eager competitors sailed from Les Sables d'Olonne, France in July 2018. Only five have returned, the final one finishing on 20 May, after 322 days at sea. The rest, along with their tired and broken boats, are left scattered around the globe.

Here follows a very short overview of a very long, dangerous and arduous adventure at sea.

Recap: You should remember that entrants were limited to using the same type of yachts and equipment that were available in that first 1968 race. Sailing without modern technology or benefit of satellite-based navigation aids. From nearly 30 that registered for the 2018 fleet, 17 sailors from around the globe, departed Les Sables D'Olonne on 1 July 2018 - among them two Australians, as well as one woman, the youngest member of the group, at 28. Some were salty seadogs - many, veterans of several circumnavigations, and

others relative novices, though all were experienced and well-prepared sailors, fierce competitors and careful technicians.

This race was a test of the competitor's ability, physical strength and their true mettle.

Day 6 - The first retirement was that of Ertan Beskardes (UK) for personal reasons, shortly after leaving the Bay of Biscay.

Day 16 - As the fleet passed the Canaries, Kevin Farebrother (Australia), and Nabil Amra, the US based Palestinian, withdrew. The South Atlantic also took its toll, with Antoine Cousot (France) and Francesco Cappelletti (Italy), a late starter, retiring to Brazil. Before the fleet passed the first of the four great capes, a third of the fleet had retired, many of these due to difficulties with self-steering systems.

Day 44 - Phillipe Pécché (France), who had led the Golden Globe Race almost continuously since the start, sustained damage in a 50 knot gale, which required a port call at Cape Town for repair. He was moved to the Chichester Class and decided to withdraw.

The first life-threatening damage was sustained as the yachts entered the Southern Ocean south of Cape of Good Hope.

Day 58 - Are Wiig (Norway), rolled through 360° and was dismasted in a gale. He was able to set a 'jury rig' and sailed back to Cape Town.



Jean Luc deep in thought with the finish line in sight

Image: Christophe Favreau

By the time the race leaders were heading across the Indian Ocean, the fleet had separated into three distinct groups. The leaders carving through at breakneck speed, the middle still making good time but being hampered by storms and giant seas, and the tail-end finding themselves often becalmed and frustrated.

Then it started to get really frightening.

With converging weather fronts in the Southern Ocean, two of the boats were hammered. Abilash Tomi, an Indian Navy Commander, was rolled and dismasted, and sustained a serious back injury. He couldn't move from his bunk. An international rescue was mounted. In the same storm, Gregor McGuigan, the Irish entrant, had also sustained serious damage but was relatively unhurt and was able to set up a 'jury rig', which would have enabled him to limp to Australia, 2000 miles away, for repairs. Gregor elected to be rescued at the same time as Abilash, just in case things took a turn for the worst, he didn't want to be responsible for a second rescue, when one was already on hand - a sensible decision.

Day 85 - Abilash Tomi (India) and Day 87, Gregor McGuigan (Ireland), rescued in southern Indian Ocean. Yachts abandoned. Rescuers themselves are not without risk, but particularly so when the person being rescued is incapacitated. The sailing community held their breath until Abilash was safely aboard the rescue vessel. He has since had major back surgery and is recovering well.

In the same storm, Mark Slats (The Netherlands) in second place, was



Coconut in the Southern Ocean

Image: Mark Sinclair

knocked down, his companionway stove in and he was washed overboard. Mark, a mountain of a man with endless determination, was able to recover onboard, make good the damage and continue racing.

Jean-Luc Van Den Heede (France), slipped through between storms and extended his lead. By the half-way film drop at Hobart, Australia Jean-Luc held a 1600 nautical mile lead over Mark Slats.

Day 106 - Race leader Jean-Luc Van Den Heede enters the Pacific Ocean.

Day 111 - Loic Lepage (France) dismasted and taking water, 600 miles southwest of Perth. Three days later he was rescued, his yacht sunk soon after.

Day 128 - With the combined effects of weather, skill and luck the fleet is spread

out across 7,000 nautical miles of the Southern Ocean, spanning the Indian and Pacific Oceans. Jean-Luc Van Den Heede has stretched his lead on second placed Mark Slats, to 2200 nautical miles.

Day 127 - In the central Pacific, Jean-Luc Van Den Heede is hit by a violent storm, knocked down and damages his mast lower shroud connection. He contemplates withdrawing and returning to Valpariso for repairs, but after telephoning his team headquarters (an unauthorised call which resulted in an 18 hour time penalty) he decides to press on and sail conservatively and try to stay ahead of Mark Slats.

Day 135 - Mark Slats is sailing hard and has closed the gap on the race leader by 500 miles during the preceding week.

Day 148 - Jean-Luc Van Den Heede rounds Cape Horn and gains on all but Mark Slats.

Day 157 - 5 December, a distress call is received from Susie Goodall (UK), 2000 miles west of Cape Horn. She had been pitch-poled and dismasted. She was OK apart from a nasty bump on the head but her boat was wrecked. (For the uninitiated, pitchpoling means the front of the boat propels into a rising wave and the boat flips end over end, rolling upright in the opposite direction.) Susie was towing a drogue (a drag weight on a long line) to slow her down in a huge storm. It is believed the rope snapped, which propelled her forward into the trough of the wave. She was completely disabled and bobbed around for two days until picked up by a passing tanker. Her yacht sunk, Susie is landed in Chile a week later.

The barnacle bill. Several of the fleet, particularly those at the back end, had severe problems with gooseneck barnacles, which can cause enormous drag on the boats, depending on the infestation. Mark Sinclair's (Australia)



CHRISTOPHE FAVREAU / GGB 2013

Barnacle infested hull

Image: Christophe Favreau



The winners circle - Uku Randmaa, third; Jean-Luc Van Den Heede, first; Mark Slats, second

Coconut, was one of these boats. Ordinarily, these could be scraped off on a calm day. Unfortunately, with the calm days came sharks. So, no scraping of hulls! Mark Sinclair was also desperately low on water.

Day 164 - Mark Sinclair berths in Adelaide due to barnacle build-up and lack of fresh water and is relegated to the Chichester class. Igor Zaretskiy (Russia) pulls into Albany sighting barnacle infestation, he does not continue.

Any boat stopping for assistance automatically drops to the Chichester Class, but can continue to race, as long as they make no more stops. Mark arrived in Adelaide on Day 158, 6 December, and immediately began work on *Coconut*. On 12 December, after much soul-searching, Mark announced that he was retiring from the Golden Globe Race. He acknowledged that he had taken too long to reach his half-way point, sailing conservatively further north to avoid dangerous storms also meant that he missed out on rain needed to replenish his drinking water. Setting off again for Cape Horn this late in the season would be a dangerous venture. We suspect he has already started planning for the next Golden Globe Race in 2022!

Day 167 - 15 December, Jean-Luc Van Den Heede has 4610 nautical miles to go, with Mark Slats closing. Only five competitors remain.

Day 173 - Uku Randmaa (Estonia) rounds Cape Horn.

Day 190 - Mark Slats closes to within 417 miles of Jean-Luc Van Den Heede.

Day 198 - Racing through the North Atlantic, Mark Slats closes to within 50 miles of race leader Jean-Luc Van Den Heede in a nail-biting race to the finish. But it is as close as he will get.

Day 211 - 29 January 2019 - Jean-Luc Van Den Heede, in his Rustler 36

yacht, *Matmut*, crosses the finish line in Les Sables D'Olonne to a hero's welcome. He has completed the Golden Globe solo around the world race in just 211 days, 23 hours, 12 minutes and 19 seconds. His journey is more than 100 days faster than Sir Robin Knox-Johnson achieved in 1968 and Jean-Luc becomes the oldest person to complete a solo, non-stop circumnavigation in a race.

The 73-year old French veteran of six solo circumnavigations, takes two titles from Britain's Sir Robin, the sole finisher of the 1968 Sunday Times Golden Globe Race, 50 years earlier. Until the finish gun fired at 09:12 UTC, Sir Robin had held the title as the oldest solo circumnavigator in a race, after completing the Velux 5 Oceans Race in 2007 at the age of 68.

2018 Golden Globe Race founder, Australian Don McIntyre, summed up the result, 'Jean-Luc Van Den Heede and his magic sure deserves to be right where he is, out front. His boat helps, nothing more. He is the perfect blend of age, experience, discipline and talent, supported by a very well-prepared boat'.

Day 213 - Two days later, having been held up by severe storms, 42-year old Dutch sailor, Mark Slats and his Rustler 36 Ohpen *Maverick*, takes second place.

Day 218 - The race for third. Istvan Kopar is within 500 miles of third placed Uku Randmaa. Uku is running out of food with 3,100 miles to the finish. Tapio Lehtinen still slowed by barnacles, is about to round Cape Horn.

Day 252 - Uku Randmaa and his Rustler 36 *One and All* crosses the finish to claim the third podium place. He is looking lean and hungry.

Day 263 - 21 March 2019, Istvan Kopar (USA) and his Tradewind 35 *Puffin* secures fourth place.

Kopar's return left just one more skipper at sea - Finland's Tapio Lehtinen and his Gaia 36 *Asteria*, still 4,227 miles from the finish.

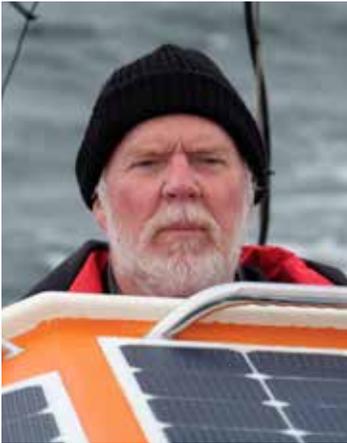
The 2018 GGR prize giving in Les Sables d'Olonne was held on April 22 - the day that Sir Robin Knox-Johnston completed the first solo non-stop circumnavigation 50 years before.

Day 322 - 20 May - Tapio Lehtinen is the fifth and final finisher. What incredible determination! ▲



Tapio Lehtinen approaches the finish line

Image: Christophe Favreau



Six months in a leaky boat!

By MARK SINCLAIR, Captain Coconut

Coconut motored into Royal South Australian Yacht Squadron at dusk on Wednesday 5 December 2018, after sailing for 157 days and covering approximately 13,500 nautical miles (nm). This voyage commenced in Les Sables d'Olonne in France, and was conducted non-stop, single-handed and without the use of modern technology. *Coconut* was participating in the 2018 Golden Globe Race (GGR), a re-enactment of Sir Robin Knox Johnson's circumnavigation in *Suhaili*, 50 years before. When *Coconut* retired from the race, six vessels were still sailing; at the time of writing, four have subsequently finished, one vessel made port in Albany and one vessel is still at sea. Of the original 18 starters, five vessels were dismasted and six retired in the North or South Atlantic Oceans, for various reasons. My participation in this adventure provides an interesting opportunity for reflection.

Sir Robin Knox-Johnston was the first person to sail solo, non-stop and unassisted around the world in 1968 – 69 and by accomplishing this feat, became the winner of the Sunday Times Golden Globe Race. He was the only competitor to finish, sailing in his 32-foot yacht, *Suhaili*, in a time of 312 days. To make the 2018 GGR authentic, similar conditions to the 1968 race were adopted, including yacht design and on-board equipment. Entrants must sail without the aid of modern technology including satellite-based navigational aids. For example, the following equipment is not allowed: GPS, radar, AIS, chart plotters and electronic charts, electronic wind instruments, electric auto pilots, electronic log, mobile phone, iPhone, iPod, Kindle or any computer-based device, CD players, electronic watches/clocks, video cameras and electronic digital cameras, satellite equipment of any kind, digital binoculars, pocket scientific calculators, water maker, carbon fibre, spectra, Kevlar, vectron, any high-tech materials, rod rigging etc.

The original Golden Globe Race required competitors to depart from any port in Europe north of 40 degrees latitude. The 2018 GGR was initially planned to start in Falmouth, which was where Sir Robin Knox-Johnston departed in *Suhaili*. Unfortunately, due to lack of sponsorship support this was changed to Plymouth,

however Plymouth also failed to secure sponsorship. Fortunately, Les Sables d'Olonne stepped in, and the race was moved to France. Les Sables d'Olonne has experience in hosting single-handed around-the-world yacht races as it is also the home of the famous Vendee Globe Race, which is conducted every four years and has world-wide following.

Coconut is a Lello 34 from South Africa; it is thought Brian Lello designed the class in 1966 in preparation for the first Cape to Rio Race in 1971. It is a strong, seaworthy vessel, with a narrow beam of 2.9 metres, a traditional long keel and a draft of 1.9 metres. Originally named *Windy Lou*, *Coconut* was built in Durban, South Africa in 1981. Documentation that came with *Coconut* indicates she circumnavigated the globe in the late 1980s, which included cruising in the Mediterranean, crossing the North Atlantic and transiting the Panama Canal, cruising the Pacific Islands, including French Polynesia and Fiji, and returning to South Africa.

Although *Coconut* is of sound design, a significant refit was required to prepare her for the 2018 GGR. Structural work included inserting hanging knees in the saloon to strengthen the hull to deck joint, improving watertight integrity with a watertight door in the bulkhead at the forward end of the main saloon,

removing the anchor and chain and inserting floatation in the chain locker forward of the collision bulkhead. New windows were inserted in the main cabin and dog house. Safety upgrades to standing rigging included fitting new chainplates, replacement of the single spreader with double spreaders, fitting a permanent inner forestay and a new boom. The running rigging was also



Hard-earned Golden Globe participation trophy



The Parade of Sail, Falmouth UK , 10 June 2018

replaced, running backstays added to brace the inner forestay and a new suite of sails made. To improve safety all halyards are led back to the new doghouse to minimise time spent on the foredeck. New pulpit, pushpit and solid guardrails were fitted at a height of 80 centimetres. Heavy sampson posts and fairleads were fitted to the quarters to tow warps in the event of heavy seas. Lifelines, tiller and emergency rudder and tiller were also replaced. The engine, an original Farymann 22 HP diesel, was refurbished.

A new HF transceiver and receiver and VHF were fitted. As well as for communications, time signals are transmitted on HF at a frequency of 10, 15 and 20 MHz, which are used to check the rate of the chronometer. I carried a 1946 Hamilton deck watch and a 1904 Waltham 8-day chronometer to provide the time for astro-navigation. Two sextants were carried, as well as Radio Direction Finding equipment and a Walker Trailing Log. New batteries, solar panels and new wiring were also fitted. There is also a long list of safety equipment including satellite tracking and communications equipment, carried for safety for communication with race headquarters. An AIS alarm and EchoMax radar alarm were also fitted to aid collision avoidance.

Coconut was prepared for the race in Adelaide and transported to London as sea freight on a cradle in a flat rack container. She was loaded onto MSC (Mediterranean Shipping Company) *Luisa* at the Flinders Ports container terminal on Saturday 27 January. MSC *Luisa* then sailed across the Great Australian Bight and berthed in Fremantle the following week, where the other Australian entered vessel was also embarked, Kevin Farebrother's Trade Wind 35 *Sagarmatha*. On 8 March, *Coconut* arrived in London after a journey by sea, via: Perth, Singapore, Colombo, Saudi Arabia and Valencia. *Coconut* then travelled by road and arrived without a scratch at Plymouth Yacht Haven in Turnchapel, Devon on 14 March 2018.

Final preparations for the GGR were conducted at Plymouth Yacht Haven. Hardcopy charts were supplied by Sea Chest in Plymouth; I carried a total of about 35 charts, including larger scale charts of: Plymouth, Falmouth and Les Sables d'Olonne; Canary Islands; Capetown and Port Elizabeth; Storm Bay; Foveaux Strait and the approaches to Port Stanley. For the ocean crossings I plotted astro-navigation sights and courses directly on the 1:10,000,000 scale charts. There were mandatory race gates at Canaries

and Hobart, where 35 millimetre and Super8 film was dropped off, and I also arranged for an additional rendezvous off South Africa. Back in Plymouth, numerous trips to Cash and Carry were made to purchase provisions, including 300 tins of fish, 300 boxes of juice, 150 tins of baked beans, 1200 tea bags, 120 sachets of muesli and 6 kilograms of oats. I also carried dehydrated food and pre-made vacuum packed meals. Treats included pickled eggs, gherkins, pickled onions and baby beetroot. I was unable to find canned cheese but took parmesan which kept well without refrigeration. Fresh provisions were obtained later and included eggs, onions and lemons.

On 10 June, *Coconut* sailed from Plymouth to Falmouth in company with *Suhaili*, with a crew of helpers from Plymouth. Festivities were held in Falmouth, celebrating Sir Robin's departure 50 years before. These included events at St Mawes Yacht Club and the Royal Cornwall Yacht Club. On 14 June, the 50th anniversary of Sir Robin's departure, a colourful parade of sail was held lead by *Suhaili* and *Gipsy Moth IV*, followed by a charity race across the English Channel and along the coast of Brittany to Les Sables d'Olonne, exceeding 300 nautical miles. Sailing past iconic

calendar lighthouses in Brittany and into the Bay of Biscay to Les Sables d'Olonne, we arrived at 0520 on 17 June.

A race village was set up in the inner harbour at Les Sables d'Olonne, with displays and events on a daily basis. Thousands of visitors visited the docks to inspect the boats and encourage the entrants. The strong support from the administration and public was amazing. At the same time entrants' briefings were held and final preparations made on the boats. There was a strong connection with history, with Sir Robin in regular attendance, as well as visits by Alex Carozzo of Grancia Americano, who participated in the original race. Film workshops were run by Jesse Martin, and Jessica Watson visited in June 23.

On the morning of 1 July, the GGR fleet motored out between the harbour breakwaters, which were lined deep with cheering supporters. A sizeable spectator fleet accompanied the yachts to the starting area off the coast. The race was started between *Suhaili* and *Joshua* from the original race, and the yachts headed out into the Bay of Biscay.

The traditional around-the-world sailing route from Europe takes into account the trade winds in the northern and southern hemispheres. There is a general band of low pressure near the equator which draws in the trade winds; these are then bent by Coriolis force to the right in the northern hemisphere, and to the left in the southern hemisphere. This results in the northeast trades in the North Atlantic Ocean and the southeast trades in the South Atlantic Ocean, separated by the doldrums, an area of variable winds with rain and squalls. Either side of the trade winds are the variables or horse latitudes, which are dominated by the North Atlantic high (clockwise winds) and South Atlantic high (counter clockwise winds) respectively. For this reason, the traditional sailing vessel

route comes down the eastern side of the North Atlantic Ocean, off the west side of Africa and past the Canary and Cape Verde Islands, south of which the doldrums are encountered. It then heads west towards St Paul Rocks and then south down the west side of the South Atlantic Ocean to the Island of Trindade, off the coast of Brazil, before swinging around the bottom of the South Atlantic high towards the island of Tristan da Cunha. This is the course I followed.

Crossing the Bay of Biscay, light head winds were experienced, which resulted in a slow beat to Cape Finisterre. The wind then backed to the northwest and gradually strengthened over the coming days to become the northeast trade winds, and with the assistance of the Canary Current *Coconut* averaged 120 nautical miles per day, sailing south off the coast of Morocco. On 14 July, *Coconut* sailed by the gate at the southern end of Lanzarote in the Canary Islands, just minutes ahead of another competitor *Liberty II*. Over the following days the wind hardened to a north-easterly up to Force 6, and in rough following seas jackstays were rigged down below to move around safely. The strong offshore winds turned the sky yellow with sands of the Sahara. On 29 July Sargasso weed was encountered and the Walker Trailing Log was recovered; a companionway awning was rigged to provide shelter from the intense sun and it was a sticky 30°C down below. *Coconut* passed inshore of Cape Verde Islands and light west and southwest winds were experienced on the back end of the tropical wave in the doldrums.

At this time of year, the southeast trade wind crosses the equator and continues to about 5 degrees north latitude, where it is deflected to the southwest due to Coriolis force. *Coconut* headed west towards the infamous St Paul Rocks, off the northeast coast of Brazil, where the wind gradually backed around to the southwest and then

west. *Coconut* headed southwest and then south, making about 2 degrees of latitude per day, and on 15 August passed to seaward of Trindade Island, where the wind backed around to the north and enabled course to be altered to the southeast. A spray jacket was worn for the first time and it was cold and rainy, running square with three reefs in mainsail and number three headsail boomed out on the pole. Over the following days the course continued generally south, between southeast and southwest, depending on the wind direction and the position of the South Atlantic high and associated cold fronts. The wind varied greatly in strength and direction and on 20 August I celebrated my 60th birthday. *Coconut* then passed about 120 nautical miles north of Tristan da Cunha, where the weather became colder still. On 2 September, Southern Ocean conditions were experienced running before northwest then southwest gales, with hourly squalls and hail, and occasionally being slapped on the stern by the odd 5 metre breaking wave.

One of *Coconut's* upper staysail hanks clipped onto spinnaker halyard and fouled the furling anti-wrap and I had to ascend the mast to clear it. During this incident my woolly hat was blown overboard and while returning to the cockpit down the leeward side *Coconut* rolled heavily and the water ran over the top of and into my wellies. The wind then became variable and I had four days of light eastsoutheast winds and tacked back and forth to maintain sea room, some 70 nautical miles west of Table Bay, before a fresh North-westerly set in and I was sailing under storm jib and trysail. *Coconut* bounced across Benguela Current, avoiding shipping, and made landfall at Capetown on 13 September. She was met by the yacht *Pippin*, with fellow Lello owners and letters and films were landed.

It was early spring with frequent gales still being experienced in the Southern Ocean. The seas south of South Africa can be particularly violent due to the impact of the Agulhas current, which runs strongly inside Madagascar, then along the continental shelf around the bottom of Africa and eddies spin off into the South Atlantic. For this reason, I decided to sail close inshore to avoid the Agulhas current and cross it on the east side of South Africa, where conditions are more benign. One competitor, Are Wiig, was dismantled in heavy seas south of Capetown at this time.

From Capetown, *Coconut* proceeded south and navigating by echo sounder rounded Cape of Good Hope at night on the 100 metre isobath and then sailed inside Six Mile Bank off Cape Agulhas before a westerly gale. To avoid the current, the 50 – 60 metre isobath was generally followed, occasionally picking up a counter current. This was an interesting area for coastal navigation sailing close inshore off spectacular mountain scenery. There





were many vessels to seaward in the traffic separation scheme off South Africa and only a few inshore coastal vessels, and many migrating whales, some of which past quite close by.

On 19 September I was running before a south-westerly gale east of Port Elizabeth on the narrow continental shelf, between coast and the Agulhas current. A southerly buster came through and to control *Coconut* I heaved to under storm trysail to wait for the wind and sea to abate the following morning. A few days later I was again under storm canvass heading north before large seas to avoid more severe conditions further south. Shortly after, two competitors, Abhilash Tomy and Gregor McGuckin, were rolled and dismantled, while second place Mark Slats suffered two major knockdowns in 70 knots wind before 14 metre seas.

The rescue was managed by the Joint Rescue Co-ordination Centre in Canberra; the French fisheries patrol vessel *Osiris* was the closest to the scene. An executive jet was despatched from Perth to assess the situation and the ANZAC class frigate HMAS *Ballarat* sailed from Perth. Independently, Indian authorities despatched a military plane from Mauritius and diverted the frigate INS *Satpura*. The sailors were rescued by *Osiris*, with Australian and Indian reconnaissance aircraft circling overhead, and were taken to Amsterdam Island prior to being transferred to *Ballarat* and *Satpura*.

Over the next 4 weeks *Coconut* experienced calms and gales. It was still Autumn, and course was shaped to avoid sailing too far south this early in the season. A few times *Coconut* was caught too far north and experienced southeast winds, then had to tack and fight south in light winds through the middle of the high-pressure system to the westerly winds on the southern side. I also experienced several waving fronts, alternatively crossing cold and warm fronts and back again, which produced shifting winds up to gale force and confused seas from multiple directions and occasional fog. On 2 October a warp was streamed towing a tyre to steady *Coconut* in severe conditions; heavy seas occasionally filled the cockpit.

I observed spring bioluminescence from upwelling nutrients when I crossed the Madagascar Ridge, and small squid regularly landed on deck which were fed to the ever-present albatross. On 19 October a pod of orcas crossed 100 metres ahead of *Coconut*. On 26 October, I passed by Amsterdam Island and conversed with the station hands on VHF. About this time the competitor Loic Lepage was dismantled and his vessel sank off Perth; he was rescued by a west-bound passing ship and later landed in South America. On 1 November, I sailed past Gregor's drifting abandoned vessel from which AIS was still operating. At that time, I was down to about 60 litres of fresh water as I had been unable to catch sufficient rain to replenish the tanks. *Coconut* was also slowed from

the growth of abundant barnacles on the keel and rudder. On 19 November, I passed 330 nautical miles south of Cape Leeuwin and altered course to Adelaide, coming alongside on 5 December 2018.

I retired from the race due to heavy barnacle infestation on *Coconut's* hull, which significantly slowed progress and due to lack of fresh water. Although I had been very successful in catching rain in the tropics, very little was harvested in the Indian Ocean, and sharks prevented cleaning the hull at sea. Once alongside, it seemed sensible to retire from the race as I would need more leave to continue and my ETA at Cape Horn was also later than planned. *Coconut* was also back in her home port and I could enjoy Christmas with my family.

What lessons did I learn from the experience? Firstly, to avoid the reasons for having to come alongside and subsequently retire, I will fit a larger fresh water bladder tank in *Coconut's* keel and will refresh the antifouling paint just prior to the start of such a major voyage such as this. I will also fit isolating cocks on all bilge pump outlets, to stop water running back in the pipes when heeled over in rough weather. I think I would still adopt the same traditional approach to the race and sail a similar conservative course, but would push south of latitude 40 degrees earlier, say from the mid Indian Ocean onwards, as the weather improved in Spring. ▲



Potentially-volatile dangerous goods cargoes go undeclared

By DAVE MACINTYRE, analytical commentary columnist, NZ Shipping Gazette*

Given the recent fire onboard the Yantian Express and the multiple loss of life that occurred with the fires and explosions on the MSC Flaminia in July 2012 and the Maersk Honam in March 2018, one might think the shipping world has defined its problems with dangerous cargoes and put in place measures to solve those problems.

Think again.

According to the leading international freight and logistics insurer, TT Club, there are weekly reports of ship fires, and on average a major fire every 60 days that involves loss of life or damage to the ship, disruption and costs.

There is another chilling figure that the insurer produces - that there are some 150,000 ticking container timebombs that are shipped each year carrying potentially-volatile cargo that has been mis-declared.

Wrongly-classified, declared or labelled dangerous goods (DG) are seen as a primary hazard at sea. The master does not know what potentially-lethal cargo the vessel is carrying.

The representative body of cargo handling and container terminal operators, ICHCA International, has extrapolated statistical evidence of the extent of the problem. It calculates that of an estimated 60 million packed containers moved around the world each year, 10 per cent are declared to contain DG.

That equates to six million containers that need varying degrees of special handling, positioning in terminals and stowage onboard. However, information from inspections by several countries, which are focused mainly on declared DG shipments, suggests that more than 20 per cent are poorly packed or incorrectly identified.

That ratio converts to about 1.3 million potentially-unstable declared DG loads per year – and that does not reveal the amount of DG cargo that goes undeclared or mis-labelled.

An initiative by Hapag-Lloyd and more lately by IBM, has seen the development of a detection system, Cargo Patrol, which attempts to identify cargoes that may be undeclared DG at the time a

shipper books the move, leading to more detailed investigation before acceptance.

From the “potential hits” thrown up by the detection system it would seem that between 2-5 per cent are more than likely undeclared DG cargoes. It suggests maybe 150,000 or so containers are being carried where the shipping lines, terminals and others in the supply chain have no idea they are handling potentially-volatile cargo.

The issue of undeclared DG is part of a bigger picture of poor practice in the overall packing process. TT Club records indicate that as much as 66 per cent of incidents related to cargo damage can be attributed in part to load distribution and cargo securing as well as poor data transfer from classification and documentation, through to declaration.

These incidents are estimated to cost insurers in excess of US\$500 million each year, and many could be avoided. As the size of container ships increases, so does the potential risk and consequences of a large explosion or fire.

Now, an international project is underway to try and improve the standards of cargo packing, handling and declaration, called the Cargo Integrity Campaign, being led by TT Club, along with ICHCA.

The campaign is to be a long-running project spread over some years to consistently raise awareness in all of the areas of deficiency mentioned above. There are several areas in which particular initiatives are being pursued.

Last September, TT Club called for urgent action on the safety of container transport at the International Maritime Organization’s Sub-Committee on Carriage of Cargoes and Containers (CCC). ICHCA, has consultative status at the IMO, so was able to make



Explosion and fire is an insurance industry nightmare

submissions to the committee urging positive action.

One of the reasons the IMO needs to be stirred into action is that reports by IMO member states of container inspections are pathetically few – just seven countries submitting reports last year.

The number of member states reporting on their inspections has always been less than 10 per cent and currently stands at about 2.5 per cent. On average, only four or five of the 170 member states regularly report.

This is a woefully-low rate of inspection and next to useless in order to enforce regulations, drive change or provide evidence of frequent transgressors in terms of shippers and commodities.

However, TT Club and ICHCA have submitted details of the top ten commodities that may lead or have led to incidents – not all of which are classified as dangerous goods. There is a need for increased regulatory coordination and harmonisation. The two bodies urged the IMO to initiate a correspondence group to advise on the best means of achieving such unified guidelines.

Another focus is data transfer and management. TT Club's Risk Management Director, Peregrine Storrs-Fox says that the integrity of knowledge, information flow and data transfer, ranks alongside the correct care for the cargo inside the container. It also represents an area of considerable risk.

Hence the Cargo Integrity campaign. It focuses on all stakeholders in the supply

chain doing the right thing, correctly labelling cargoes and divulging content, and passing that information on.

The campaign wants more communal efforts, such as the cooperation among five of the top liner operators, to capture key incident data in order to provide an early warning of worrying trends, whether relating to cargoes that display dangerous characteristics or unsafe practices in the container supply chain.

An example is the Cargo Incident Notification System (CINS - www.cinsnet.com) now has a membership that includes 16 liner operators, representing over 70 per cent of container slot capacity.

The need for more transparency goes beyond shipping lines. Many players in the supply chain, most notably shippers and forwarders, who are responsible for packing the containers and the crucial initial declarations of what they contain, as well as ports and terminals, must become more knowledgeable about safety procedures and more vigilant in minimising errors.

One problem is that procedures governing DG handling around the world lack standardisation. In order to help clarify the situation, Exis Technologies, with the support of TT Club and its sister insurance mutual, UK P&I Club, has developed a portal integrating information on such restrictions.

The Hazcheck Restrictions Portal is designed to simplify the end-to-end management of DG booking processes, taking account of port, terminal, carrier,

ship and partner line restrictions. TT Club wants more ports, terminals and liner operators to upload their DG handling policies and restrictions into the portal free of charge, allowing use by shippers, forwarders and others.

Other areas of improvement being called for are stricter adherence to the IMO's International Maritime Dangerous Goods Code (IMDG) and the Code of Practice for Packing of Cargo Transport Units (CTU Code), including areas such as training for shore-based personnel.

The TT Club and the UK P&I Club have updated and revised the *Book it right and pack it tight* publication, which provides a thorough introduction and guidance on the provisions of the IMDG Code. This is available in PDF and paperback form at www.ttclub.com.

As a bottom line, TT Club is emphasising that the entity identified as the "consignor" on a dangerous goods document may not have direct or physical control over key elements of the end-to-end process, but nonetheless legal liability rests with that "consignor" to ensure that arrangements are in place for compliance with international and national regulations.

The buck will stop with the shipper if mis-declared dangerous goods cause an accident. ▲

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