

BEST OVERALL
DESIGN
(SILVER)
Magnum Opus
Awards 2011



▶ maritime singapore green initiative
▶ managing ballast blues ▶ new
leadership at BIMCO

3Q 2011

SINGAPORE
maritimeweek
2012

**PEOPLE
IDEAS
OPPORTUNITIES**

22-27 APRIL 2012

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The Maritime
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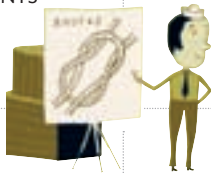
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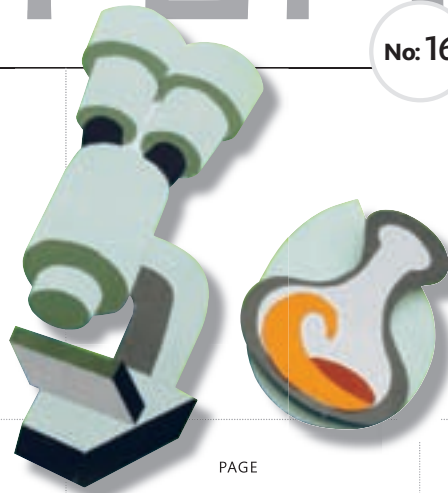
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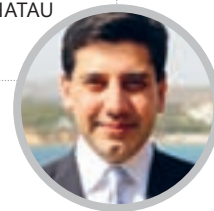
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Front Cover, Illustration, Honourable Mention

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For a green future

The Maritime Singapore Green Initiative takes centre stage in this issue of *Singapore Nautilus*. To further reduce the environmental impact of shipping and its related activities and promote clean and green shipping, MPA launched the initiative as a comprehensive package to promote environmentally friendly shipping. The initiative comprises the Green Ship, Green Port and Green Technology Programmes.

The vibrancy and excitement of Singapore Maritime Week 2011 is also captured in an extended version of our Ship's Log segment, where we showcase some of the events and happenings that occurred this year.

This issue's Technology section features a home-grown ballast water management technology, which is aimed at lowering the impact brought about by ships discharging ballast water originating in one

marine environment into another.

The new Certificate of Competency (Special Limits) programme offers shorter voyages to seafarers to avoid prolonged and difficult periods away from home. *Best of Both Worlds* in Port and Starboard elaborates on this programme, which is part of the joint efforts by MPA and other partners to attract more local talent to seafaring.

Wee Shann

executive editor



Singapore is the **first** Asian country to ratify the Maritime Labour Convention



► Singapore will ratify the International Labour Organization's (ILO) Maritime Labour Convention (MLC) with the full support of tripartite partners – the seafarer unions and the National Trades Union Congress, as well as the maritime industry and the Singapore National Employers Federation. This was announced by Senior Parliamentary Secretary for Manpower and Education, Hawazi Daipi, at the International Labour Conference in Geneva, Switzerland recently.

In submitting the instrument of ratification, Mr Loh Khum Yean, Permanent Secretary of Singapore's Ministry of Manpower, stated: "Singapore is pleased to ratify the Maritime Labour Convention 2006 with the full support of our

tripartite partners. This is a significant step for Singapore, as we commit to applying the convention's provisions to Singapore-registered ships and ships that call at our ports, as well as to achieve decent working conditions for seafarers. As a responsible flag state, Singapore had actively participated in the discussions that led to the adoption of this important convention, which consolidates and updates over 60 ILO conventions and recommendations. We look forward to it entering into force in due course."

Mr Lam Yi Young, Chief Executive of the Maritime and Port Authority of Singapore, said: "Seafarers play a critical role in enabling shipping, world trade and the world's economy. As a responsible maritime nation, Singapore is committed to enhancing

and looking after the well-being of seafarers. The ratification of MLC is part of this commitment."

In receiving the instrument of ratification, Ms Cleopatra Doumbia-Henry, ILO Director of International Labour Standards, stated: "The ratification of the MLC 2006, by Singapore, the world's largest port state and one of the top 10 flag states, sends a powerful signal to the global maritime community. Singapore is the first country of the Asian continent to have accepted the Seafarers' Bill of Rights, and we all know how vital and important this continent is for maritime trade and the global economy. This strong expression of leadership by Singapore sends the right message to other countries to come on board to enable

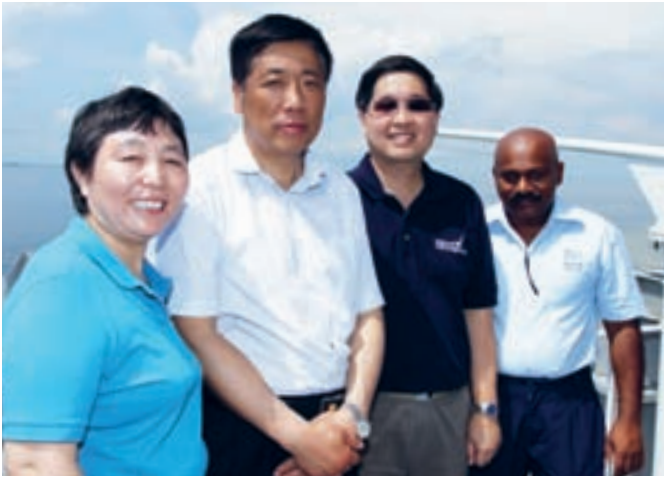
the world's seafarers to benefit from this Bill of Rights and shipowners from a level playing field."

Singapore is ranked among the world's top 10 largest ship registries and is regarded as a reputable flag state in the world, renowned for its quality fleet, and backed by an efficient maritime administration. Singapore is also one of the busiest ports in the world.

With the ratification by Singapore of the MLC 2006, 13 ILO member states have now ratified this important convention, which sets out minimum standards and fair working conditions for seafarers worldwide. While the first requirement for entry into force of the convention – coverage of 33 per cent of the world gross tonnage – has already been attained, Singapore's ratification is an important step towards achieving the second requirement: 30 ratifying countries. It is expected that the 30 ratifications will be obtained before the end of this year, indicating that the MLC 2006 will enter into force next year.



Singapore welcomes visit by senior Chinese maritime official



► Singapore played host to a senior maritime official from China, Capt Chen Aiping, Executive Director-General of Maritime Safety Administration of the People's Republic of China (China MSA). Capt Chen's two-day visit was hosted under the Maritime and Port Authority of Singapore's Distinguished Visitors Programme (DVP).

During his visit here, Capt Chen called on Permanent Secretary of the Ministry of Transport, Choi Shing Kwok. Capt Chen also met up with senior management of MPA including Mr Lam Yi Young, Chief Executive of MPA. Issues discussed included safety of navigation, green shipping and port activities, as well as cooperation on the Malacca and Singapore Straits. Both sides exchanged useful insights and enjoyed a good discussion on maritime issues of mutual interest, such as maritime security, protection of the marine

environment and other developments at the International Maritime Organization.

Launched in April 1997, the DVP aims to engage senior maritime personalities who are prime movers and key opinion makers in the international maritime community. The programme aims to establish and build good and long-lasting ties with these personalities and their organisations, as well as strengthen bilateral maritime relations.



Singapore Maritime Services Guide launched

► The Singapore Maritime Foundation (SMF) launched its inaugural Singapore Maritime Services Guide 2011 during the Sea Asia show, as part of the Singapore Maritime Week earlier in April.

Jointly developed with Marshall Cavendish and supported by the Maritime and Port Authority of Singapore (MPA), Singapore Shipping Association (SSA) and Association of Singapore Marine Industries (ASMI), the Singapore Maritime Services Guide 2011 (MSG) seeks to showcase the wide spectrum of maritime services in Singapore through a listing of the companies across various specialisations, ranging from Bunkering, Law and Arbitration, Finance and Classification Societies to Shipbrokers, Ship Surveying, Marine and Offshore Engineering, among others.

Launching the guide, SMF Chairman Michael Chia said: "Singapore strives to be an international maritime centre. We hope that the growth in Asia and the strengthening of our maritime capabilities will dovetail together to position Singapore at



the forefront as one of the thought leaders in this region."

To date, 10,000 printed guides and 6,000 CD-ROM copies have been produced. The guide seeks to be a useful resource for maritime partners who are exploring business opportunities in the Asia-Pacific region from Singapore.

SMF is also involved in raising the international profile of the Singapore maritime sector, and partners ASMI to stage the Singapore Pavilion at international maritime shows like Nor-Shipping and Posidonia. MSG is free and can be made available upon request. For copies of the guide, please e-mail corpcomms@sgmf.com.sg.

Singapore Maritime Week (SMW) is the leading maritime event in Singapore. It gathers the international community for a week of conferences, dialogues and events in celebration of all things maritime. Since its launch in 2006, SMW has been gaining prominence among participants and organisers around the world, and promises to bring more activities to the line-up every year. SMW is all about PEOPLE, IDEAS and OPPORTUNITIES. We take a look at some snapshots of SMW 2011.

PEOPLE

Maritime Exhibition



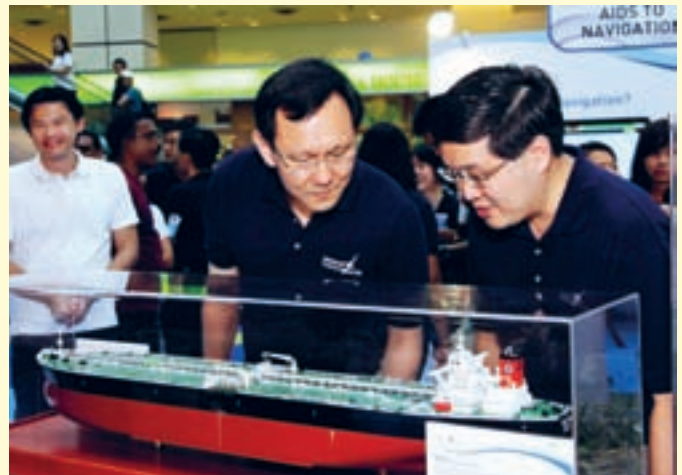
The local maritime community came together to raise awareness about Singapore's maritime industry through a maritime exhibition. Held at Suntec City Entertainment Centre Atrium from April 5 to 10, the exhibition featured ship models contributed by various maritime companies, and served as a platform for the public to learn about the maritime industry. The exhibition also showcased winning entries from the SMW Postcard Design Competition.

Maritime Singapore Lego Mural



A high-powered group from the maritime community came together to build a Lego mural depicting Maritime Singapore as part of the Singapore Maritime Week 2011. The activity saw more than 70 participants from all across the maritime community building a 4m by 2m mural using more than 100,000 Lego pieces.

Launch of SMW 2011



Mr Raymond Lim, the then Minister for Transport and Second Minister for Foreign Affairs, completed the mural by inserting the final piece as part of the official launch of SMW 2011.

IDEAS

Singapore Maritime Lecture 2011



The 5th Singapore Maritime Lecture, a key highlight of SMW, was delivered by Mr Nils S. Andersen, Group CEO of A.P. Moller-Maersk.

ICOPCE 2011



The International Chemical and Oil Pollution Conference and Exhibition 2011 (ICOPCE 2011) was a platform for stakeholders to deal with emerging challenges in the safe transportation of oil, chemicals and petrochemicals.

MTEC 2011



The International Maritime-Port Technology and Development Conference 2011 (MTEC 2011) featured prominent keynote speakers sharing views on issues such as green shipping, port development, technology and operations.

OPPORTUNITIES

Singapore International Maritime Awards 2011



The Singapore International Maritime Awards (IMA) recognises individuals and companies for significant contributions to the country's development as a premier global hub port and international maritime centre.

Maritime Singapore Green Initiative



Twelve organisations came together during SMW 2011 to pledge their support for clean and green shipping, under the Maritime Singapore Green Initiative announced by former Transport Minister Raymond Lim during IMA 2011.

Maritime Learning Journeys



Students from the Institute of Technical Education, Singapore Polytechnic, Nanyang Polytechnic and Nanyang Technological University came together for Maritime Learning Journeys during SMW, where they learnt more about Maritime Singapore and visited port facilities and Raffles Lighthouse.

SEA ASIA 2011



Sea Asia 2011 is Asia's premier maritime conference and exhibition, bringing together maritime professionals from diverse sectors of the industry.

International Sportsweek for Seafarers



A week of sports and recreational activities marked the International Sportsweek for Seafarers, held in conjunction with SMW 2011.

SSA Young Executives Group Anniversary Reception



The SSA Young Executives Group 5th Anniversary Reception was organised by the Singapore Shipping Association (SSA) to connect young executives in shipping.

Tanjong Pagar FSC Lighthouse Visit



As part of MPA's Corporate Social Responsibility project, visitors from the Tanjong Pagar Family Service Centre embarked on a tour of Raffles Lighthouse, led by MPA's CARE team.

Visit by Korea Coast Guard



MPA hosts a delegation from the Korea Coast Guard, led by Senior Superintendent General Kim Suk Kyoan.

Visit by NIMASA



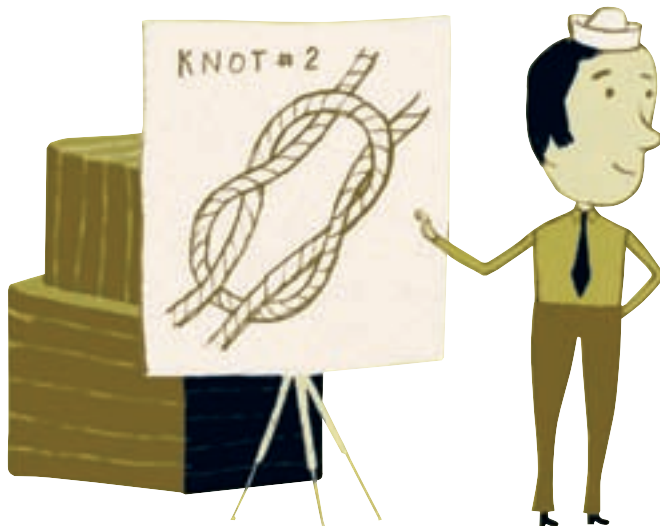
The Nigerian Maritime Administration and Safety Agency (NIMASA), led by Chairman (Board Establishment Delegation) Nurudeen Rafindadi, visits MPA.

Visit by CDSS



The Australian Centre for Defence and Strategic Studies (CDSS), led by Colonel Colin Patrick Richardson, pays a visit to MPA.

BEST OF BOTH WORLDS



THE CERTIFICATE OF
COMPETENCY (SPECIAL
LIMITS) PROGRAMME
ENABLES ASPIRING SEAFARERS
TO WORK CLOSER TO HOME.

BY ANGELIA SEETHO

Seafaring holds the promise of a wealth of opportunities. While many contemplate a career at sea, one factor that hinders the attraction of manpower is the prolonged period away from home. The lack of communication with family and friends for three to six months while at sea can be a daunting challenge to overcome, especially for young seafarers and those intending to start families.

With this in mind, the Maritime and Port Authority of Singapore (MPA) joined forces with National Trades Union Congress' (NTUC) Employment and Employability Institute (e2i) and the Workforce Development Authority (WDA) to launch the new Certificate of Competency (CoC) (Special Limits) programme for Singaporeans and PRs. The programme allows seafarers to serve on board ships that operate in the Special Limits zone, mainly in Singapore waters and those off Bintan, Batam and Johor.

The programme is intended to attract more local talent to Singapore's vibrant maritime industry while giving the flexibility of shorter voyages.

Collectively, MPA, e2i, WDA and Singapore Shipping Association's (SSA) affiliated companies will contribute over \$2.3 million in support of the CoC (Special Limits) programme – funding that will support the course fees and training

allowances of the candidates.

The first batch of 30 students started their training in April, while the second intake will commence in October.

High standard of skills

The 21-month course is open to N-level holders with passes in English, Physics/ Chemistry and Mathematics. Although it is considerably shorter than the Singapore Maritime Academy's (SMA) three-year programme, this does not translate to a lower standard of skills. In fact, the CoC (Special Limits) programme's standards of training are kept closely in line with International Maritime Organization's (IMO) Standards of Training, Certification and Watchkeeping Convention.

Capt M Segar, MPA's Group Director (Hub Port) and Director (Port Division), says: "The programme is ideal for those who want to get into a seafaring career quickly, as it equips candidates with the skills to perform tasks required on board ships in a shorter period of time. If candidates secure employment with potential employers before their training commences, they will have the advantage of getting paid a salary as they learn."

The CoC (Special Limits) programme is a platform for becoming a captain of a ship. When trainees begin their on-the-job training, they start off as deck cadets on

board vessels that operate within the Special Limits. Upon graduation, cadets are qualified to work on ships as Chief Mate (Special Limits). A Chief Mate can also take an exam to qualify as Master (Special Limits) after serving 24 to 36 months of sea time. The course includes three phases of training: pre-sea induction, where they learn the basics of practical seamanship, boat handling and survival techniques; on-the-job training, where they work aboard a ship; and the exam preparatory course, which prepares them for a final written exam.

If candidates decide to progress to international seafaring, they can then go on to obtain a qualification with the other certifications offered by MPA.

Programme preview

Earlier this year, a cohort of shortlisted candidates to the programme, part of the inaugural April intake, was invited to tour a bunker tanker. As part of the showcase of the training programme, they visited a Sentek Marine bunker tanker to get an insight into the type of ship they would be working aboard.

The programme is ideal for those who want to get into a seafaring career quickly, as it equips candidates with the skills to perform tasks required on board ships in a shorter period of time.





DETAILS OF THE CERTIFICATE OF COMPETENCY (SPECIAL LIMITS) PROGRAMME

- **Phase 1 - Pre-sea induction (four months):** This foundation phase will give candidates knowledge of seamanship and shipboard operations including navigation, life-saving, firefighting, first aid, operation of bunker tankers, tug boats and passenger vessels.
- **Phase 2 - On-the-job training (12 months):** Candidates will have hands-on experience with job attachments on board ships to apply the skills acquired during training.
- **Phase 3 - Exam preparatory course (five months):** This summary stage will reinforce the experience and knowledge obtained by the trainees, and prepare them for assessment.

Upon completion of apprenticeship and passing the examinations, the trainee cadets will be issued with the Certificate of Competency (CoC) to enable them to serve as Chief Mates on ships plying within the Special Limits. The standards of training and CoC issued are in line with International Maritime Organization's Standards of Training, Certification and Watchkeeping Convention.

GREEN THE

SUSTAINABILITY IS MAKING WAVES. THE MARITIME AND PORT AUTHORITY OF SINGAPORE'S NEW MARITIME SINGAPORE GREEN INITIATIVE AIMS TO ENCOURAGE SHIPOWNERS TO SUPPORT CLEAN AND GREEN SHIPPING. BY SHERALYN TAY

▶ It's full steam ahead for the future of green shipping. From Maersk's carbon-efficient container ships and APL's use of low-sulphur fuels, to Keppel Offshore & Marine's zero-discharge vessels, many leading maritime companies are looking at ways to make their operations more

environmentally sustainable.

Giving this movement a huge boost is the \$100 million Maritime Singapore Green Initiative launched in April 2011 by the Maritime and Port Authority of Singapore (MPA). The initiative is aimed at encouraging firms to implement environmentally

friendly shipping practices beyond the ones already mandated by the International Maritime Organization (IMO).

Green efforts

The initiative provides a comprehensive package to incentivise companies to undertake eco-friendly

shipping practices. It comprises the trio of Green Ship, Green Port and Green Technology Programmes.

The Green Ship Programme is aimed at supporting the use of efficient ship designs that reduce fuel wastage and carbon dioxide emissions. Under this, Singapore-flagged

WINNING SEAS



ships designed to be energy efficient and which exceed IMO efficiency requirements will be given a 50 per cent reduction in their Initial Registration Fees and a 20 per cent rebate on Annual Tonnage Tax (ATT).

The Green Port Programme seeks to reduce the emission of pollutants by ocean-going ships calling at the Port of Singapore. Vessels which use approved abatement technology or burn clean fuel can qualify for a 15 per cent reduction on port dues.

The Green Technology Programme is aimed at encouraging local maritime companies to develop and adopt green technologies to reduce pollutant emissions. To spur local maritime companies towards adopting environmentally friendly

technologies, MPA has set aside an initial amount of \$25 million (with the possibility of another \$25 million) from its Maritime Innovation and Technology (MINT) Fund. Firms can tap on this to offset up to half the cost for such projects, subject to a cap of \$2 million per project.

According to MPA, this initiative seeks to reduce the environmental impact of shipping and its related activities, and promote clean and green shipping. Lam Yi Young, Chief Executive of MPA says: "Environmental challenges are some of the most critical ones facing the maritime industry today. They are multi-faceted and require joint efforts from governments and the industry. Through the Maritime Singapore Green Initiative, MPA will continue




KEEPING A LID ON EMISSIONS

Shipping keeps the world economy going by transporting 90 per cent of global trade. IMO estimates that international shipping accounts for some three per cent of global greenhouse gas emissions. If unchecked, carbon dioxide emissions from the maritime sector could surge by 150 to 250 per cent by 2050.

Since 1997, IMO has regulated air pollution and greenhouse gas emissions via

an annex to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). Most recently, parties to MARPOL Annex VI adopted technical and operational measures to reduce greenhouse gas emissions from ships – as amendments to MARPOL Annex VI at the 62nd session of the IMO Marine Environment Protection Committee in July 2011. These measures regarding the energy efficiency of ships represent the first-ever, mandatory global greenhouse gas reduction regime for an international industry, and are expected to come into force on January 1, 2013.





“Environmental challenges are some of the most critical ones facing the maritime industry today. They are multi-faceted and require joint efforts from governments and the industry.”

to work in close partnership with the maritime community to address the environmental challenges facing shipping and port activities.”

Getting on board

These measures come about as climate change and environmental pressures mount. The maritime industry now accounts for approximately three per cent of global carbon dioxide emissions, and IMO estimates that this could surge by 150 to 250 per cent by 2050.

The need for carbon mitigation has thus become an important issue for the maritime sector. Some have already responded by driving research and development in cleaner fuels and more efficient technologies. In fact, 12 organisations

pledged their commitment to promote and support clean and green shipping in Singapore, in tandem with the announcement of MPA’s Green Shipping Initiative at the inaugural Maritime Singapore Green Pledge in April 2011.

Local leaders

Singapore’s own signatories of the pact included companies like Keppel Offshore & Marine, Sembcorp Marine, PSA, Jurong Port and APL – the liner arm of Neptune Orient Lines. The firms have been making inroads of their own to do their part for the environment.

Keppel Offshore & Marine’s KFELS semi-submersible drilling tender (SSDT) design won the ASEAN Outstanding Engineering Achievement Award in 2009. The zero-discharge vessel adopts

“The three Green Programmes will enhance shipping’s environmental image and raise the social awareness of Singapore’s shipping community, as we take on an even more active role in further reducing greenhouse gas emissions from shipping.”

cutting-edge technology such as a stringent drilling waste management system that does away with dumping solid waste into the ocean.

Another eco-friendly and award-winning contribution from Keppel is the KFELS B-Class jackup rig, which is designed to allow marine life

to coexist with exploration and drilling activities.

At Sembcorp Marine, shipyards are certified ISO 14001:2004 and a “green mindset” is inculcated as part of its corporate culture. Water-saving devices, energy conservation initiatives and concerted recycling efforts are

among some of the initiatives employed by the company.

PSA has retrofitted its Rubber-tyred Gantry Cranes with fuel-saving devices to reduce consumption. These devices regulate the engine speed according to load, and help reduce fuel consumption by 12 to 15 per cent.

Jurong Port has developed a Go Green strategy, and has been exploring cold ironing, or the supply of shore-to-ship power, as well as cost-effective implementation strategies for alternative energy sources.

APL, too, has set a high benchmark for its efforts to mitigate the environmental impact of their business. Announcing that it will start using cleaner-burning, low-sulphur gas oil in Singapore in April 2011, APL’s 80 vessels calling at our port have

SHIPPING GOES GREEN

▾ These organisations were the signatories of the inaugural Maritime Singapore Green Pledge.

- BP Singapore Pte Ltd
- Ocean Tankers (Pte) Ltd
- Jurong Port Pte Ltd
- Pacific International Lines (Pte) Ltd
- Keppel Offshore & Marine
- PSA Corporation Ltd
- Maersk Line – Asia-Pacific Region
- Sembcorp Marine
- Maritime and Port Authority of Singapore
- Shell Marine Products
- Neptune Orient Lines Ltd
- Singapore Shipping Association





converted to marine gas oil despite the higher cost. The decision is expected to curb sulphur oxide emissions from ships by almost 90 per cent.

Another signatory to the Green Pledge was Danish shipping line Maersk. For some years now, it has taken the lead, committing to reduce its carbon emissions per container moved by 25 per cent by 2020 (compared with emissions in 2007). And it is making good progress, having achieved a 14 per cent reduction to date.

This has been achieved through a wide-ranging approach to improve operational efficiency. Maersk has implemented a practice

called slow steaming under a programme that began in 2008.

Since then, the technique of halving cruising speeds has reduced fuel consumption by as much as 30 per cent, thereby cutting costs. Slow steaming is currently employed by half of the world's ships.

Most recently, Maersk launched its Triple-E class of container vessels – the most CO₂-efficient container ships to date. According to the company, these ships were designed to emit 20 per cent less carbon dioxide per container moved, compared to the most efficient container vessels operating today.

Teo Siong Seng, then President of the Singapore

Shipping Association, lauds the initiative and the pledges, noting that they signal the political will to bring sustainability to the shipping and port sector.

“I am glad that MPA, as a leading ship registry, has taken the initiative to launch a comprehensive, pro-environment initiative for Singapore's maritime sector. The three Green Programmes will enhance shipping's environmental image and raise the social awareness of Singapore's shipping community, as we take on an even more active role in further reducing greenhouse gas emissions from shipping,” he says.

MARITIME SINGAPORE GREEN INITIATIVE'S PROGRAMMES

◉ Green Ship:

It is aimed at supporting the use of efficient ship designs that reduce fuel consumption and carbon dioxide emissions.

Benefits

Qualifying Singapore-flagged ships will enjoy a 50 per cent reduction of Initial Registration Fees and a 20 per cent rebate on Annual Tonnage Tax payable.

◉ Green Port:

This programme encourages ocean-going ships calling at the Port of Singapore to reduce the emissions of pollutants.

Benefits

Ocean-going vessels with abatement/scrubber technology, or which burn clean fuel in compliance with the programme, during the entire port stay (of five days or less) within the Singapore Port Limits, will be granted 15 per cent concession in port dues.

◉ Green Technology:

It encourages local maritime companies to develop and adopt eco-friendly innovations to cut pollutant emissions.

Benefits

This programme covers up to half of the total qualifying costs to develop and/or adopt green technological solutions/systems, and is capped at \$2 million per project.





► Singapore's growing reputation as a centre for maritime education and training in Asia received a boost with the addition of another specialised short-term course. The North of England (North) Protection and Indemnity (P&I) Club is bringing its annual residential training course in P&I insurance and loss prevention to Singapore this October, the first time this highly popular course is being taken outside the UK.

This course by North joins the likes of other renowned maritime programmes that have sprung up here, as more course providers choose Singapore as their preferred location when they start the Asian equivalent of their popular programmes. These include the University of Southampton's Maritime Law and Practice course that has gained increasing popularity not just in Singapore, but also around the region since it was started here in 2009. Another example is the BIMCO Asia Shipping School, which BIMCO decided to run in Singapore on a regular basis since 2010.

According to North's Manager James Moran: "Asia is a growing area for us and

shipping in general. We have seen an increase in our tonnage in this region and in Singapore particularly for many years now." This growth has seen many delegates from the region wanting to take North's course in the UK, which will be in its 19th edition this year, and is always heavily oversubscribed.

"The idea of bringing the course to Singapore is to try and service our members' needs in this region and offer this training to them," Moran adds. Not only will the course here make it easier for delegates to attend, but will also effectively double the number of candidates North can take in one year.

Singapore was chosen as a location for many reasons, says Moran. With so many of North's contacts and an office already in the country, it made perfect sense to start the course here, he shares.

But in addition, Singapore was also a logical choice because "it's easy to get to and well set up, and the authorities have been helpful in offering support and assistance", Moran says.

To support North in starting the course here, the Maritime and Port

Authority of Singapore (MPA) worked closely with the company via the Maritime Cluster Fund (MCF). The fund's Manpower Development Scheme is one of the key initiatives MPA uses to help develop manpower, training initiatives and capabilities in the maritime industry. In 2010, more than 450 companies and over 1,500 employees benefited from the MCF – Manpower Development programme.

Making sense of it all

The course aims to provide a comprehensive introduction to P&I insurance, claims and loss prevention. Starting with an overview of the different types of insurance for shipowners and how they fit together, the course will then look at the cover provided by P&I insurance for liabilities with respect to ships, people and cargo. A continuing theme throughout the course is loss prevention, both proactive (preventing accidents and incidents from occurring) and reactive (mitigating claims and preventing recurrence). Each session will include a workshop for participants to

NORTHERN LIGHT



THE START OF THE MUCH SOUGHT-AFTER TRAINING COURSE IN P&I INSURANCE AND LOSS PREVENTION OFFERED BY THE NORTH OF ENGLAND P&I CLUB ADDS ANOTHER FEATHER TO SINGAPORE'S MARITIME CAP.

BY VINCENT WEE

apply the knowledge gained, a port visit and practical exercise on a bridge simulator.

One local delegate who attended North's course in the UK can certainly testify to the benefits she has gained. Yvette Oh, a claims manager at insurance broker LCH, says that before she went on the course, all her knowledge was theoretical, but the real-world case studies and practical experience she got were very helpful in improving her understanding of the claims she has to deal with.

She counts the field trips on board actual vessels and her experience in the simulator as among the most useful elements to her. The opportunity to meet people from the industry and all over the world was also useful in building industry knowledge and contacts, she adds.

Although North has yet to publicise the course which will run later in October, "we have received positive enquiries not only from Singapore, but from Malaysia, Indonesia, Japan, Korea, Hong Kong and other parts of the region too", Moran shares.

THE MARITIME CLUSTER FUND

MCF – Manpower is available for the development of manpower, training initiatives and capabilities within the maritime industry. Accessible to companies and individuals supported by their firms, the fund focuses on developing and enhancing the pertinent skills of maritime employees. Supportable activities are categorised under three broad schemes:

TRAINING@MARITIME SINGAPORE

- External training including short courses and certifiable courses
- In-house training by maritime companies

TALENT@MARITIME SINGAPORE

- Industrial attachment for students
- Overseas attachment for maritime employees
- Management Associate Programme

INVESTMANPOWER@MARITIME SINGAPORE

- Industry-wide development projects
- Enterprise-specific development projects

Visit www.mpa.gov.sg/mcf for more information.



DOING



RIGHT



SENTEK MARINE WAS A TINY LOCAL START-UP IN 1993, BUT IS NOW A LEADING BUNKER SUPPLIER IN SINGAPORE. WE LOOK AT SOME OF THE THINGS IT HAS DONE RIGHT AND THE FUTURE OF THE LOCAL BUNKERING INDUSTRY.

“Do it right and do it better” is Sentek Marine’s motto and the company’s answer to competition in the marine fuel industry. This guiding statement has worked well for the firm over the years.

The company started out with just one single-hull, 2,000 deadweight tonnage (DWT) bunker tanker in 1993, and now owns a fleet of 15 tankers with a total capacity of 42,000 DWT.

Singapore’s economy.

Sentek Marine also picked up the Bunker Award at this year’s Singapore International Maritime Awards (IMA), which was held during the Singapore Maritime Week to honour firms and individuals who have made outstanding contributions to Singapore’s development as a global hub port and international maritime centre.

Pai remains humble about

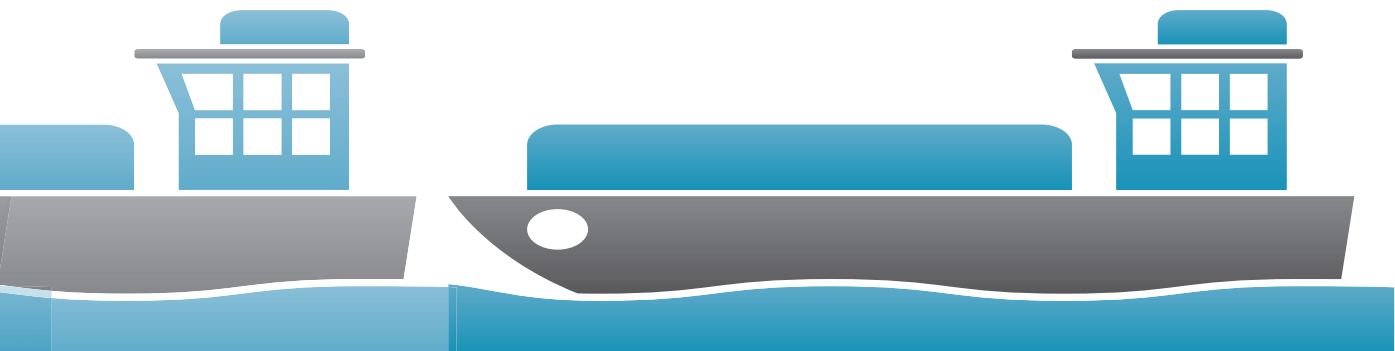
that the current manpower crunch will be a concern for many. “It seems that there is insufficient quality crew being trained to meet the ever-increasing demand for vessel supply. With more and more players entering the industry, competition also becomes more intense,” he explains.

Sentek Marine hopes to help resolve the issue of crew shortage by participating in the new Certificate of Competency

A future in Singapore

Pai is optimistic about Singapore maintaining its position as a leading bunkering port in the future. “Singapore has a very strong geographical advantage. We are lucky to be in one of the few locations in the world where the weather will not affect bunkering.”

Pai also cites Singapore’s solid port infrastructure with huge storage facilities, and a local fleet containing about



Sentek Marine’s core business is in bunker trading and the physical supply of bunkers at the Port of Singapore.

“We continue to explore all possible opportunities in order to facilitate trade expansion, while expanding our fleet to support physical delivery,” says Pai Keng Pheng, Managing Director of Sentek Marine.

Testament to the company’s steady growth, Sentek Marine has been picking up industry awards over the years. In 2004, the firm was a winner at the Enterprise 50 Awards, which recognises local, privately held companies that have made significant contributions to

these achievements. “We are very glad that our efforts have been recognised and we will continue to do our best in the future,” he says.

One possible reason why Sentek Marine has been doing well is the open and friendly environment at its workplace.

“We let all our staff and customers know that we are always open to suggestions and good ideas. Sentek Marine is not a family business, but we work like a family,” he shares.

Manpower challenges

Given the fluid nature of the maritime industry and the tight labour market, Pai sees

(Special Limits) programme initiated by the Maritime and Port Authority of Singapore. The programme aims to attract more local talent to the industry by introducing shorter voyages to provide greater flexibility.

Pai acknowledges that crew shortage is a problem for the entire maritime industry, but feels that Sentek Marine is equipped to take these challenges on.

“With the experience we have gained over the past decade or so, as well as the advantage we have in our infrastructure, we are confident that we can position ourselves ahead of our peers,” he says.

200 bunker tankers as part of why the country will continue to play a lead role in the future. Shipowners also place confidence in Singapore’s bunkering standards to optimise the efficiency of operations.

Sentek Marine is firmly in line with Singapore’s plans to stay ahead of the game. Pai shares: “We are still expanding our fleet to be consistent with our fleet renewal programme, and hope to replace our single-hull bunker tankers completely over the next five years. We will continue to work hand in hand with our partners to promote Singapore as a leading bunkering port.”

GOING GLOBAL

THERE WERE ONLY 10 EMPLOYEES WHEN LIONEL LEE, MANAGING DIRECTOR OF EZRA HOLDINGS LIMITED, BEGAN HIS CAREER IN THE COMPANY. NOW UNDER THE OPERATING BRAND EMAS, THEY HAVE MORE THAN 2,500 EMPLOYEES WORKING IN 16 LOCATIONS GLOBALLY.

What made you venture into the maritime industry?

My father was one of the pioneers of the oil and gas industry. He started off in the shipyards and, whenever he visited the yards or ships, he would take me along. My mother was hoping that I would do something else after graduation, but I wanted to learn the ropes from my father. Together, we saw various opportunities to expand the business, and it all just took off from there.

What are some of the challenges EMAS has faced, and how have you attempted to address them?

As oil companies venture into deeper waters, one of the challenges will definitely be in hiring competent crew. EMAS has set up a training academy with advanced simulators to train the people we need for upcoming projects. With the academy, we can show clients that we are able to simulate huge projects, and recognise all the risks involved in big installations offshore, as well as how we can mitigate them.

What do you think gives EMAS a competitive edge?

Our competitive advantage is in our ability to provide a full suite of comprehensive





services at best value, as evidenced by our strong engineering and project execution track record. The acquisition of Aker Marine Contractors (AMC) from Norway's Aker Solutions in March 2011 has enabled us to be among the leading global operators of large construction vessels in the subsea arena. We are now able to participate and compete in the offshore and subsea construction sector, supported by solid engineering capabilities and assets.

What's the future of EMAS?

EMAS AMC will be responsible for the group's global subsea construction business with offices in Houston, Singapore and Oslo. Our offshore support vessels provide the backbone of what we are today, while the production division is working to put together all the right building blocks, so we can grow to become a significant player in providing floating production, storage and offloading (FPSO) platforms and floating platforms. The business now also involves the installation of supporting infrastructure for deep-water oil and gas projects.

We hope that with good strategic alliances within the region and around the world, we can improve our foothold in the foreign market. By 2013, we will have access to 10 enabling construction vessels equipped with remotely operated underwater vehicles. We also hope to have three to four FPSOs in the medium to longer term. In the near future, we are looking towards the delivery of our platform supply vessels as well as new pipelay vessels.

Complete the sentence: I solve problems by...

Putting together a competent team to look at issues. I believe having quality people will enable us to do well, so my main priority is to attract the best talent from all over the world to drive the business.

What drives you?

My competitors keep me on my feet. They remind me that we need to be constantly challenged in order to be better at what we do.

BIMCO'S NEW WARRIOR

YUDHISHTHIR KHATAU, VICE-CHAIRMAN AND MANAGING DIRECTOR OF VARUN SHIPPING COMPANY LIMITED, IS THE YOUNGEST PRESIDENT EVER IN THE BALTIC AND INTERNATIONAL MARITIME COUNCIL'S (BIMCO) 106-YEAR HISTORY.

As the incoming president of BIMCO, what will be your top priority when you take up office?

These are challenging times for all of us. We are facing difficult market conditions at the moment, as well as many new requirements stemming from a demanding environmental agenda.

My top concerns are the continuance and support of the Green movement, with the aim of keeping regulatory requirements practical and non-discriminatory, and ensuring a level playing field for everyone in the industry. It is imperative that shipping maintains its position as the most cost-efficient, reliable and environmentally friendly mode of transportation, and fulfils its role in the supply chain of the world economy.

What role do you envisage for BIMCO in the current climate?

It is important that the council remains a

truly international shipping association representing all parties in the industry, and not be seen as favouring any particular industry segment or region.

With members from more than 120 countries, I believe BIMCO can well represent our global industry. At the council, substance is what we seek to deliver, and we must continue to strongly advocate fair trading practices, standardisation and harmonisation, and defend the need for pragmatic solutions. I believe BIMCO staff possess high qualifications, experience and knowledge that will not only provide substance to the council's work, but also enhance effectiveness and efficiency in the services and support given to our members.

What are some of the challenges facing the industry today, and how does BIMCO fit into this picture?

Energy is a key issue facing shipping

– not only in terms of the running cost of a ship, but also as one of the main commodities being transported by vessels, and as a driver for the regulatory changes we will see in the coming years. Nuclear energy is not a feasible solution for legal and security reasons. With the present forms of alternative energy like wind power and solar, we will not be able to meet the high energy intensity required to transport 90 per cent of world trade, at least in the foreseeable future. Thus, we are stuck with fossil fuels for a long time ahead, and this will admittedly present us with challenges in the future.





BIMCO will, of course, play a natural role in working out these challenges and will, through constructive dialogue with regulators and other stakeholders, strive to protect our members' interests in the best possible manner. The council always takes a practical approach to complicated issues, and works with regulators to focus on the sensible

application of new regulations to ensure they do not unfairly impact shipping.

If you weren't in the maritime industry, what other career paths would you have chosen?

My passion has always been towards building businesses. I would have focused on the power or telecommunications sector as alternatives to the maritime industry, as my roots stem from working with Siemens India in the corporate planning division and heading India's largest power-cable manufacturing enterprise.

What are some of the hobbies you pursue, and how do you find the time to indulge in them?

I believe that a hobby is an expression of who you really are. I grew up in Africa

and spent a lot of my time in nature, so I love wildlife and marine photography.

While the global nature of the shipping business requires me to travel extensively, I do manage to spend weekends and holidays with my family.

What are you reading at the moment, and do you have someone you model your work and personal philosophies after?

I am currently reading *Warrior of the Light: A Manual* by Paulo Coelho as well as *Execution: The Discipline of Getting Things Done* by Larry Bossidy and Ram Charan.

There have been many mentors and peers who have influenced my thoughts and inspired me to work to the best of my abilities. The real drive, however, comes purely from within.

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Singapore Nautilus is the quarterly corporate publication of the Maritime and Port Authority of Singapore. Reaching out globally, the magazine covers the latest maritime-related news and initiatives in Singapore, and provides a platform for thought leaders to share ideas on international maritime trends and developments. You can sign up for a free subscription to *Singapore Nautilus* by e-mailing us at SN_subscribe@mpa.gov.sg

DEVELOPED BY A FULLY HOME-GROWN TEAM LED BY DR J. PAUL CHEN OF THE NATIONAL UNIVERSITY OF SINGAPORE, THE BLUESEAS BALLAST WATER MANAGEMENT SYSTEM IS A COST-EFFECTIVE AND CUTTING-EDGE TECHNOLOGY FOR BALLAST WATER TREATMENT. BY VINCENT WEE

MANAGING BALLAST BLUES

▶ Merchant vessels, such as container ships and tankers, ballast and deballast in order to maintain stability while loading or discharging cargo. A ship takes in ballast water (a process known as ballasting) when cargo is unloaded as it needs added weight. Deballasting then takes place at the next port of call when cargo is loaded on board the ship.

With the rise of international trade and over 50,000 merchant ships trading internationally, it is estimated that more than 10 billion tonnes of ballast water are transferred across international seas annually as ships move between ports.

A wide variety of marine organisms are present in ballast water, including micro-organisms, phytoplankton

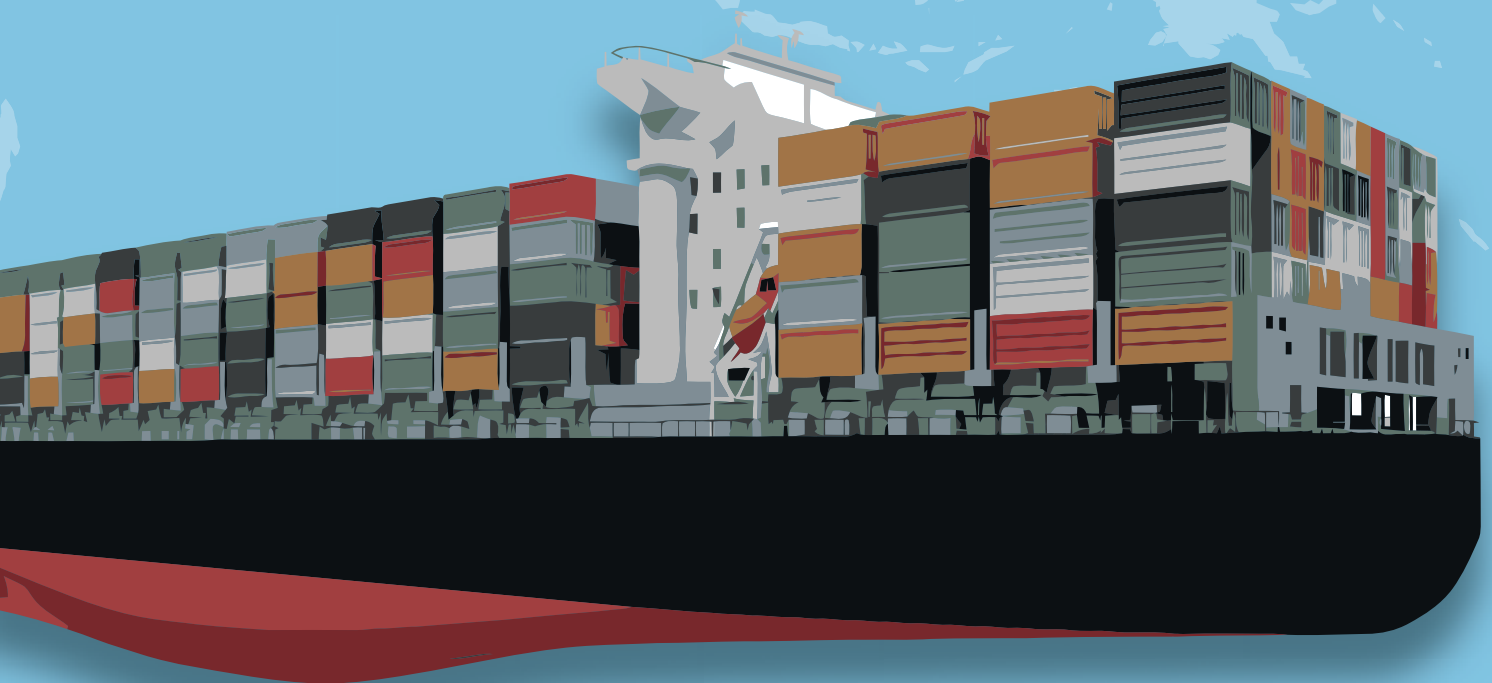
and zooplankton. While most species will not survive the voyage, some do thrive to form viable populations when being discharged into their new environment.

Displaced from their natural surroundings, alien species can cause extensive ecological and economic damage. In addition to causing diseases such as cholera, these invasive

species can lead to billions of dollars in economic damage as they affect industries such as fisheries, water utilities, agriculture and tourism. The unpredictable environmental repercussions of alien invasive species may also be irreversible.

Regulatory steps

The consequences of the transfer of non-native



organisms through ballast water has become increasingly apparent, leading to international regulatory measures being put into place. In 2004, the International Maritime Organization (IMO) adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention), which adopts a quality standard for discharged ballast water. Ships must install and use an on-board Ballast Water Management System (BWMS) to treat discharged ballast water by 2016. However, the actual timeline will depend on the year of construction and the ballast water capacity of each ship.

System issues

Several factors make the application of BWMS challenging. Most pertinent among these is the need to discharge high volumes of ballast water in a short space of time. With ships' turnaround times getting shorter, these systems must be able to ballast the vessel to the appropriate level quickly.

When considering adoption, the biggest concerns of shipowners and operators are space requirements and power consumption. Even if vessels attempt to adopt a BWMS, traditional systems are bulky, taking up precious space on board. There may also be cases when ships which need to deballast quickly (due to economic reasons) choose to discharge ballast water directly into the sea.

A range of BWMS has been tested and developed in recent years. It centres around two main technologies: physical technologies (which include filtration, hydrocyclone separation, UV radiation and ultrasonication) and chemical ones (including biocides, ozonation and chlorination).

Singaporean innovation

A team of researchers led by Dr J. Paul Chen from the National University of Singapore's Faculty of Engineering started doing research on BWMS with

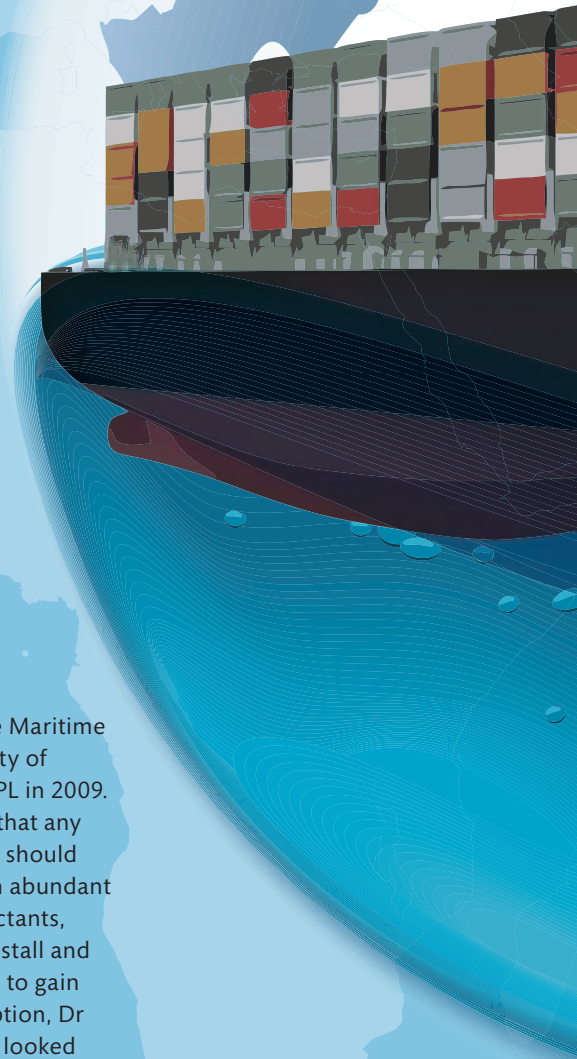
support from the Maritime and Port Authority of Singapore and APL in 2009.

The team felt that any possible solution should have access to an abundant source of disinfectants, and be easy to install and operate. In order to gain widespread adoption, Dr Chen's team also looked towards a solution with a small on-board footprint and low energy consumption.

The genesis of the team's concept was the recognition that seawater contains a huge amount of chloride. When a direct current is applied to seawater, chlorine can be produced. Highly active chemicals known as free radicals can also be generated by the same process. Both chlorine and

free radicals have been proven to be highly effective in the disinfection of micro-organisms in tap water.

To date, Dr Chen's team has successfully developed two innovative electrolytic treatment technologies for ballast water treatment, one of which is known as the BlueSeas Ballast Water Management System (BlueSeas BWMS). Recently





granted basic approval from the IMO Marine Environment Protection Committee (MEPC 62), BlueSeas BWMS is now on the path to commercialising the technology.

"The BlueSeas BWMS technology uses a patent-protected, highly cost-

effective electrode, together with a series of supporting devices to treat ballast water. The electrode produces chlorine and free radicals from the seawater itself to get rid of the various organisms and prevent their reactivation or regrowth," says Dr Chen.

"BlueSeas BWMS also eliminates the need for storage and transportation of chemical disinfectants."

The team has conducted a series of tests to show that the system meets IMO's required quality standard for discharged ballast water from ships, with an energy consumption of less than 40kW per hour (which translates into an

approximate cost of \$10), and a footprint of less than five square metres for treating 1,000 cubic metres per hour of ballast water.

To ensure the marine environment will not be affected by the discharge of chemically treated ballast water, BlueSeas BWMS has a built-in intelligent control system to regulate the concentration of chemicals in the discharged water.

Studies conducted on BlueSeas BWMS have shown that the levels are even lower than the values required for normal tap water.

"With BlueSeas BWMS, shipowners can look forward to a cost-effective technology for ballast water treatment," shares Dr Chen.

TECHNICAL



EXCHANGE

A DELEGATION FROM THE CHINA MARITIME SAFETY ADMINISTRATION VISITED SINGAPORE RECENTLY FOR DISCUSSIONS ON SAFETY AND ENVIRONMENTAL PROTECTION. BY JACQUELINE CHIA

► “This is a trip for friendship, communication and learning,” said the Director-General of China’s Guangdong Maritime Safety Administration (MSA), Liang Jianwei. This was his opening remark at the start of a five-day technical visit by China MSA to Singapore, with Liang leading a delegation of over 50 members from the administration to exchange ideas with the Maritime and Port Authority of Singapore (MPA). The key discussions centred around issues such as port state control inspections, search and rescue at sea, youth career-building programmes and overall maritime development. MPA brought the delegation to the Integrated Simulation Centre and the Port Operations Control Centre to share how training and vessel traffic management operations are conducted.

China MSA is the civilian maritime regulatory body which formulates and implements policies and regulations to ensure maritime safety and the prevention of marine pollution in the country.

China MSA also undertakes long-term planning to develop China’s maritime safety supervision systems. This technical visit led by Liang follows an earlier visit from Capt Chen Aiping, Executive Director-General of China MSA, on MPA’s Distinguished Visitors Programme.

On safety

One aspect which China MSA discussed with MPA was that of tackling current and new safety issues which arise from the shipping industry – a common challenge for maritime authorities. Liang shared that there are two concerns to help boost safety at sea: the awareness of safety guidelines and industry compliance to regulations. He described the successful compliance of safety guidelines as “a series of chain reactions” in which everyone, from the crew to the captain, as well as the shipping companies and maritime authorities, must act in accordance to set safety rules.

“If we can’t get these parties to work together to implement guidelines, then safety will surely be compromised.



Maritime authorities must continue to work towards improving and ensuring the safety of vessels at sea, as well as address environmental concerns,” he said.

On talent

There was also much discussion between Singapore and China about cultivating young talent for the maritime industry. Liang shared that meeting with MPA had shed light on some of the similarities and differences between both organisations’ approaches to talent management.

During this visit, China MSA brought along 10 selected youths from its talent management programme. Candidates from China MSA’s talent management programme undergo intense training that

is catered to prepare them for the diversity of the maritime industry.

This includes internships with local shipping enterprises, a tutoring system where a student is mentored by an experienced member of the sector, and the opportunity to study at the World Maritime University in Sweden.

One of the youths, Zhang Wei, who was on his second official visit to Singapore, was very enthusiastic about the exchanges between both countries, as they served as good exposure for him. “I’m very impressed by MPA’s innovative approach to staff and talent management. I believe China can learn a lot from MPA’s programmes to nurture and develop its staff,” he noted.

ARBITR

THE HIGH

Filippo Lorenzon

Dato' Jude P. Benny

Captain Rajesh
Subramanian



ARBITRATING ON THE SEAS

LEGAL ARBITRATION WITHIN SHIPPING IS PROBABLY AS OLD AS THE INDUSTRY ITSELF AND, NOW, SINGAPORE IS WELL POISED TO BECOME A KEY HUB FOR ALL ARBITRATION.

► Ship collisions, bunker disputes, international treaties and agreements – these are just some of the maritime-related issues that require legal arbitration.

With institutions such as the Singapore Chamber of Maritime Arbitration (SCMA), Singapore is gradually carving out a reputation as the place to settle maritime legal issues. Courses such as the one jointly conceived by the University of Southampton's Institute of Maritime Law and the Singapore Maritime Foundation (SMF) are ways in which Singapore is boosting its maritime legal capabilities.

To find out more about the Institute of Maritime Law's Singapore Short Course (which has just run its third edition), and the climate of maritime law at large, *Singapore Nautilus* speaks to:

● **Filippo Lorenzon**,
Director, Institute of
Maritime Law, University of
Southampton, UK

● **Dato' Jude P. Benny**,
Managing Partner,
Joseph Tan Jude Benny LLP,
Singapore

● **Captain Rajesh Subramanian**,
Senior Marine Superintendent,
Executive Ship Management
Pte Ltd, Singapore

SINGAPORE NAUTILUS: What is the appeal factor of the Institute of Maritime Law's 3rd Singapore Short Course (as compared to the one in the UK or other similar courses)?

FILIPPO LORENZON (FL): The Singapore Short Course has, in three years, established itself to be as highly regarded as the one we have run for 38 years in Southampton. The course is one week shorter than its English counterpart. While some topics are not covered, this was done deliberately to cater to the Asian market and respond to the needs of the local legal community. The research-cum-teaching experience and practical insights of our

course speakers ensure the same level of rigour in the examination and discussion of crucial legal issues in commercial shipping. The smaller numbers also make for a more intimate learning environment.

Holding the course here gives excellent networking opportunities for delegates in the region, and the varied experiences and opinions of delegates add to the diversity of the issues debated during the course.

DATO' JUDE BENNY (DJB): The Singapore course is designed to facilitate attendance by delegates in Asia. We have found that the attractive pricing and the fact that the course is one week shorter here (than its UK counterpart)

are factors which attract busy professionals.

CAPTAIN RAJESH

SUBRAMANIAN (CRS): Being a mariner, my exposure to maritime law was during my studies in nautical college as part of the core competency curriculum. This course has given me new insights by exposing me to the practical application of shipping law from a legal practitioner's perspective.

The discussions and course content equip participants with knowledge of the various aspects of shipping law, while providing a platform for those who intend to expand their horizons in this field. I felt that I was able to grasp the intricacies of the practice within the condensed time frame, due to the use of challenging case studies and scenarios presented during the course.

SN: What do you think of the maritime arbitration scene in Singapore?

FL: It seems to me that Singapore is preparing itself

to become a key arbitration hub, not only for the Asian market but also for the global shipping community. As the centre of the maritime world appears to be shifting towards Asia, Singapore seems to be in the right place at the right time. SMF has just launched the Singapore Ship Sale Form (SSF), which contains a default Singapore arbitration clause. Other similar initiatives may follow and it seems the country is ready to harness these opportunities.

This year, Professor Charles Debattista and I visited the brand new International Centre for Dispute Resolution at the Maxwell Chambers. We were both extremely impressed by the facilities made available to arbitrators, counsels and all parties concerned.

DJB: There is no doubt that the maritime arbitration scene here is taking off in a big way. Any practitioner you speak to will tell you that in the last 12 months, there has been a sharp increase in cases. I think the restructuring of SCMA gives parties more say

Singapore is now a well-established maritime hub. With increasing volumes of trade across Asia, it will be an obvious choice as a place for dispute resolution.

Captain Rajesh Subramanian, Senior Marine Superintendent, Executive Ship Management Pte Ltd, Singapore



in the choice of arbitrators, and the arbitrators have more latitude to run the arbitrations. There are no institution fees or fixed scale of fees – shipping people seem to enjoy this freedom.

CRS: Singapore is now a well-established maritime hub. With increasing volumes of trade across Asia, it will be an obvious choice as a place for dispute resolution. Singapore provides financial and logistical benefits to shipowners as a location for settling disputes.

SN: How can Singapore strengthen its maritime arbitration sector?

FL: From a solicitor's point of view, there are three key elements of a good arbitration hub: expertise, enforceability and speed. Singapore is an attractive venue for local and foreign arbitrators – provided there are no issues of enforceability – and it will be a matter of time before we witness a sharp increase in the number of disputes arbitrated here.

Certainly, the initiatives of SMF will prove to be very effective; it may take some time, but things are clearly going in the right direction.

DJB: Awareness, awareness and awareness – I have always said that the starting point is to make people aware of the advantages of SCMA and to encourage them to include its dispute resolution clause in their contracts. Hence, we need to focus on and invest in this exercise.

CRS: While Singapore has

a strategic advantage due to its geographical location, facilities for smooth maritime arbitration bring added value to the already existing world-class infrastructure and environment for the shipping fraternity. A good amount of work has already been done (an example being this course) to publicise and propagate this new dimension. With more cases being arbitrated in Singapore, it is expected that there will be more spoken and written about the arbitration scene here.

Disclaimer: The views expressed herein are the contributors' own and are true to the best of their knowledge and beliefs. The views do not necessarily represent those of their respective organisations.



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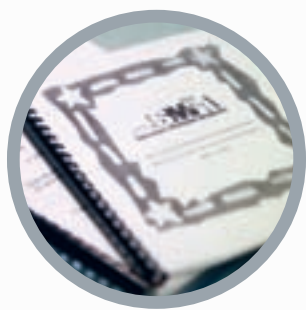
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GROOMING THE FUTURE GENERATION AS A TEACHER CAN BE CHALLENGING AND SATISFYING. A MARITIME LECTURER TALKS ABOUT COMBINING HIS PASSION FOR ENGINEERING AND TEACHING. BY JACQUELINE CHIA

SHAPING THE



► Chief engineers shoulder a great deal of responsibility for the safe running of a ship as they are tasked with managing operations and all engineering machinery on board a vessel. Wearing many hats, they also have to determine the consumables (for example, fuel and lubrication oil) required for voyages and oversee all major maintenance activities.

Singapore Nautilus meets up with Joseph Lee, a former chief engineer and current senior lecturer of marine engineering at Singapore Polytechnic. He has utilised this acquired sense of responsibility and passion for engineering to pass on his valuable experience to those who need it most – his students,

who will one day become engineers on board a ship as well.

Tell us about your career before joining Singapore Polytechnic as a lecturer.

It started in 1985, after my national service. I went to sea and sailed until I became a chief engineer in 1992. Then I came onshore and worked as a technical superintendent with a technical bunker firm, and also as a surveyor for a third party marine insurance company. I joined the Maritime and Port Authority of Singapore (MPA) in 1996, and finally made the move to teach at Singapore Polytechnic in 2000.

What were some of the challenges out at sea?

I had to make sure all of the ship's machinery ran well and try to learn as much as I could about the vessel when I was on board. Getting the chance to go to new places all the time and learn about their culture and history was a definite perk. I am fortunate enough to have been to a variety of places including Australia, South America and many parts of Europe and Asia.

Why did you decide to "jump ship" and teach?

I feel that teaching is even more challenging than being out at sea. As a teacher, I realise the importance of moulding a future that has been placed in my hands. I have witnessed how students can grow as talented individuals with the right encouragement and motivation.

Of course, there is extra work involved. Students who enrol in such a specific course for the first time upon completing their O levels do not possess much technical knowledge, and it takes extra effort to initiate them into the basics. It is satisfying when a student comes back to thank me for helping to prepare them for work out at sea.

FUTURE

So what do you think can be done to inspire young people's interest in the maritime sector?

The industry, unions and MPA can work together with schools to engage prospective young Singaporeans.

What we have at the moment is something known as Maritime Experiential Learning. In this one-week programme, we bring students on board a ship to attend talks and learn about its operations. Still, there is room for more to be done in providing a hands-on experience. This calls for more support from shipping companies.



MARITIME MONEY

► To date, Singapore has had four series of currency notes issued for general circulation by the Monetary Authority of Singapore (MAS). The Ship Series was issued from 1984 to 1999.

The visual and aesthetic themes of this series pay tribute to maritime vessels and the development of Singapore through the years.

Charting the progress of the various vessels which have plied the waters of Singapore over the years, the series starts with the *Sha Chuan* featured in the lowest denomination of \$1, and moves towards the modern bulk carrier as depicted on the \$10,000 note.

THE SHIP SERIES:

\$1: *Sha Chuan*

\$2: *Tongkang*

\$5: *Twakow*

\$10: Barter trading vessel, *Palari*

\$50: Coaster vessel, *Perak*

\$100: Passenger liner, *Chusan*

\$500: General cargo vessel, *Neptune Sardonyx*

\$1,000: Container ship, *Neptune Garnet*

\$10,000: General bulk carrier, *Neptune Canopus*





The Maritime and Port Authority of Singapore celebrates our 15th Anniversary



MPA turned 15 on 2nd February 2011, and we have created a microsite as a platform to celebrate our 15 years of achievements.

In this site, you'll find **highlights** of MPA's achievements over the years, as well as **interactive** features such as the Port Controller Game. In celebration of all things maritime, we will be running **photography competitions** with a specific theme each time around. Visit www.mpa15.sg and experience what we have in store for you!



Fun & Games



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Nanyang Business School



Class of 09/10 (EMBA Shipping, Offshore & Finance)

Nanyang Executive MBA in Shipping, Offshore & Finance

Developed jointly by BI Norwegian School of Management and Nanyang Business School, in close collaboration with industry experts. By combining the latest research and theory with a practical oriented “hands-on” approach, this programme gives you the edge in meeting up to the challenges of the shipping and offshore industry.

SPRING singapore
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Customized SME track supported by NTU-SPRING partnership for qualifying participants. For more information please visit www.spring.gov.sg/amp

Attractive scholarships are also offered by NTU on a competitive basis.

The Nanyang EMBA also offers the following tracks:

General Management

The constant change within local and global market environments requires current and relevant best practices in leadership, strategic planning, financial analysis and operations for more effective management. The Nanyang EMBA equips experienced executives with the necessary expertise to deal with these challenges. Teaching segments include classes at Haas School of Business, University of California at Berkeley and at the Wharton School, University of Pennsylvania, in Philadelphia.

Small & Medium Enterprises

Designed in close collaboration with SPRING Singapore, the programme enables executives to gain powerful insights and in-depth understanding, and experience first-hand scenarios of the complexities of doing business and succeeding in Asia.

Energy

Offered in partnership with BI Norwegian School of Management, Nanyang Business School and IFP School. The programme allows you to further develop management skills and update your knowledge of current energy and global environmental issues.

