

TRAINING JOURNAL

2019 EDITION



OPINION

Back to the Basics -
Seamanship

ANALYSIS

Empowering Seafarers
by Addressing the Skills
that Matter Most

INTERVIEW

Present Challenges and Future
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WELCOME ABOARD!

WELCOME TO REAL
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Lathe machine operation training



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“ Our approach with Training and the Continuous Proficiency Development provides seafarers with a well-established and dedicated career path, and allows us to be closely engaged with their advanced progress ”



KMSTC reaffirms its position
as one of the leading training
centres in Ukraine

WELCOME MESSAGE

Dear Readers,

Welcome to the 2019 edition of the Marlow Navigation Training Journal. It has been another eventful year for our crew training management undertakings, maintaining a full calendar of activities, responding to current industry challenges, together with systematic planning for a dynamic landscape ahead.

Each year, this publication reports on the latest training news, events and developments throughout the Marlow network. It also provides a number of featured articles and insights from key personnel and industry experts. This year, we have an opinion piece on Seamanship and why it should remain fundamental for any seafarer. SafeMetrics provides us an analysis on a pioneering project using Empirical Research and Data Science to identify and address crew skill sets that will ensure safer and more efficient operations at sea. In training opportunities, Alfa Laval explains its ballast water treatment solution, and the importance of training in a new and important application.

We also speak to the International Maritime Employers' Council (IMEC) to get their view on the present challenges and future prospects of maritime human resources and training.

In Company news, both our dedicated training centres in Ukraine and the Philippines continue to excel, upgrading facilities and enriching their course offerings and delivery.

In Ukraine, the purposely-built Kherson Maritime Specialized Training Centre (KMSTC) has further enhanced its standing in maritime training, with a host of newly accredited courses as audited by leading industry organisations, including OPITO, as well as being selected to be part of the European Maritime Safety Agency (EMSA) auditing process. These accomplishments take KMSTC to an even higher level and reaffirms its position as one of the leading training centres in the region.

Meanwhile in the Philippines, United Marine Training Center (UMTC) has become the first maritime training centre in the country to be certified in Hazard Analysis Critical Control Point (HACCP) and Good Manufacturing Practice (GMP) after successful completion of its audit by SGS, a leading Swiss-based third party certification and verification organisation.

This follows earlier industry recognition as a Centre of Excellence in maritime education and training.

More generally, key performance indicators across training activities have remained robust, including the total number of active seafarers out of training programmes, officers on board out of the training programmes, promotions of officers and prospective officers, new cadet intakes, and upgrading courses for all ranks.

Training and development is no doubt the foundation to producing and sustaining competent, highly skilled and confident seafarers. At the same time, it ensures loyalty and higher crew retention rates, thereby making seafarers far more established, specialised and experienced, which is pivotal for safer and better quality work output.

Our approach with Training and the Continuous Proficiency Development provides seafarers with a well-established and dedicated career path, and allows us to be closely engaged with their progress. This is all supported by a range of initiatives to better nurture both new and existing talent, including structured training programmes, upgrading of existing crew, regular seminars, workshops and mentoring, as well as providing various resources and material to continually enhance knowledge and provide support in daily duties.

One new part of this is a unique mobile application we are pleased to launch. This new App has been created specifically for our crew to help make the working experience while ashore and at sea more dynamic and efficient, as well as more enjoyable. With regards to training, seafarers will be able to view all their course certificates. Additionally, they will be able to check which courses they are required to attend prior to their next assignment.

We trust you find our 2019 Training Journal to be an informative and beneficial read. As always, we encourage and look forward to constructive feedback so we may continue to produce the most relevant and interesting annual reports. "Thank you" to all our clients, partners and associates in training for their ongoing cooperation and unwavering support.

*Marlow Navigation
Management*

NEWS & EVENTS - YEAR IN REVIEW

SELECTION OF PROSPECTIVE OFFICERS FROM KSMA

Marlow Navigation conducted its selection of new cadets from Kherson State Maritime Academy (KSMA) last year, with 91 chosen out of a pool of over 400 second and third year cadets to join the fleet.

This is a structured and controlled process that has been developed over many years. First, cadets must express their willingness to join the programme by completing an application. A pre-selection is then done by the academy, based on academic results in accordance with Marlow's strict criteria.

Cadets must ultimately undertake various tests, including psychometric, as well as Marlow's written tests in mathematics, physics and maritime subjects, before qualifying for the final interview stage.

"Our cooperation with KSMA continues to be strong. No doubt, it is important that our Company, and the industry at large, continues to support students and provide aspiring marine officers the opportunity to gain the invaluable, and necessary,

sea-going experience to work in the years ahead," said Captain Bankov.

Marlow and KSMA have been cooperating in the training of marine professionals for over a decade. Overall, Ukraine continues to be the largest provider of deck and engine officers for the Marlow Group.



Marlow's Crew Training Manager, Captain Martin Bankov conducting interviews



KSMA Cadets ready to take on the test and join the Marlow fleet

Training and workshops taking place during seminars for Marlow seafarers



“These seminars are extremely valuable in further increasing crews’ knowledge about the company, procedures and best practices, and of course in building an even closer relationship between our crew and shipping clients”

SEMINARS FOR MARLOW CREW

Each year, various clients arrange seminars and workshops at key Marlow Navigation recruiting and training locations around the world, to keep crew up-to-date with their company’s latest developments and procedures, as well as other important industry issues.

Last year, Marlow Philippines welcomed Ahrenkiel Steamship, ALP Maritime Services, Leonhardt and Blumberg Shipmanagement (L&B), as well as Hapag Lloyd for their annual crew conference for Marlow seafarers.

Meanwhile in Ukraine, crew seminars were held by Delta Shipping, Held Shipping, Juengerhans Maritime Services, Harren & Partner, ALP Maritime Services, SCG Crew, and a Marlow technical ship management seminar.

Other major crew seminars that took place included Ahrenkiel Steamship in Varna, Bulgaria, Stargate Shipmanagement in Szczecin, Poland, and Held Shipping in Saint Petersburg, Russia.

“We extend our appreciation to clients for their continued support in organising such seminars for seafarers, and of course to all participating crew for attending and being so actively involved,” stated Joint Managing Director, Marlow Navigation, Jan Meyering.

“These seminars are extremely valuable in further increasing crews’ knowledge about the company, procedures and best practices, and of course in building an even closer relationship between our crew and shipping client. During these events, it is also an ideal opportunity to recognise and award long-serving seafarers,” added Meyering.

Annual Hapag-Lloyd conference for Marlow seafarers held in Manila



NEWS & EVENTS - YEAR IN REVIEW

TRAINING MARINE OFFICERS FROM AUMSU

Marlow Navigation has commenced cooperation with Admiral Ushakov Maritime State University (AUMSU) and its Institute of Professional Development in Novorossiysk, Russia for the selection, education and training of university students as part of their practical sea-going training.

Representatives from Marlow's training department, including Training Director, Joern Clodius and Training Manager, Captain Martin Bankov visited AUMSU back in March 2018 to be better acquainted with the organisation, its facilities and training processes, particularly in relation to Marine Engine Room simulators, marine automation and High Voltage labs, as well as Liquid cargo handling simulators. An agreement for cooperation was in turn signed, together with a selection of a first batch of cadets, who began their training on board Marlow's crew managed vessels mid-year.

"As conveyed to the university during our visit, we are extremely impressed with AUMSU and its educational system, as well as the quality of the training and

facilities. We now look forward to evaluating and further developing this training cooperation," said Clodius.

AUMSU is one of the largest educational institutions for water transport and the only higher educational institution in the south of Russia that produces marine professionals for the shipping industry, including transport, crew and ship management companies, shipbuilding and repairs, as well as ports and transport terminals.

The University is accredited by the Council of Europe and the International Maritime Organisation (IMO), whilst State diplomas and certificates meet the requirements of international Conventions and are recognised around the world.

A selection of a second batch of cadets from AUMSU took place later in October. Another ten of the best performing third-year students were interviewed and chosen for training on board Marlow's crew managed vessels.



Exchanging the signed agreements: Head of, Crewing and shipboard training department AUMSU, Captain Igor Shapiro (left), with Joern Clodius (right) and Captain Martin Bankov (centre); in the background selected AUMSU cadets.

“ We are extremely impressed with AUMSU and its educational system, as well as the quality of the training and facilities ”

KMSTC ENHANCES STANDING IN MARITIME TRAINING

Kherson Maritime Specialized Training Centre (KMSTC) has further enhanced its international standing, as audited by leading industry organisations.

Recently, KMSTC was selected to be part of the European Maritime Safety Agency (EMSA) auditing process, due to their excellent reputation of being one of the top-performing training facilities in the country.

EMSA is one of the EU's decentralised agencies. Based in Lisbon, the agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security.

"In addition to our yearly Bureau Veritas inspection and certification of quality and safety standard, this confirmation by EMSA takes KMSTC to an even higher level and reaffirms our position as one of the leading training centres in the country," said Manager, KMSTC, Captain Sergey Dudchenko.

KMSTC has also received several additional STCW Certificate of Compliance, audited by the State Service for Maritime and Inland Water Transport of Ukraine. This includes renewal of existing courses, as well as five newly approved courses, including Proficiency in fast Rescue Boat, Restricted GMDSS operator, Hazmat, Training of passenger ships personnel, and Medical care on board.

"I know from my own experience and practice as a captain at sea the necessity and importance of seafarers



KMSTC recent OPITO audit

obtaining the relevant and proper knowledge and skills. Safety greatly depends on how seafarers react in any difficult or dangerous situation," explained Head of Maritime Administration of Ukraine, Captain Dmytro Petrenko.

"KMSTC takes an important and honourable place in such training of maritime specialists at an international level. We commend them for their highly professional activities in seafarer training and for providing the necessary and recognised qualifications to ensure utmost safety and quality," added Captain Petrenko.

Meanwhile, the annual OPITO audit reconfirmed the quality of training at KMSTC, and now also includes a newly approved BOSIET Digital Delivery. "I first visited KMSTC in August 2013 as an OPITO Auditor and found an impressive facility which had been purpose built for OPITO BOSIET/HUET/FOET training delivery. As such, the facility was and still is, a very good example of what is needed to meet all OPITO requirements," confirmed Country Manager Cyprus, OPITO, Chris Wright.

"Since then, I have been fortunate enough to revisit the centre on several occasions for further monitoring audits linked to their OPITO Approval and have always found that training is delivered to an extremely high standard by professional and knowledgeable instructors and support staff in a well maintained, safe and controlled environment.

"KMSTC represents the embodiment of an OPITO approved training facility delivering approved training at the highest level on a global stage," added Wright.



KMSTC enhances various course accreditations by leading industry auditors





President of Ukraine, Petro Poroshenko at KSMA cadets' inauguration and ceremonial parade

“*Kherson State Maritime Academy is one of the leading centres of maritime education, with exceptional training facilities*”



Inauguration and ceremonial parade of KSMA cadets

UKRAINIAN PRESIDENT AT INAUGURATION OF KSMA CADETS

President of Ukraine, Petro Poroshenko participated at the recent inauguration and ceremonial parade of new generation Kherson State Maritime Academy (KSMA) cadets at the Dnieper Promenade.

In his address to the new cadets, Ukraine's Head of the State said: "Kherson State Maritime Academy is one of the leading centres of maritime education, with exceptional training facilities. The Academy here at Kherson also closely cooperates with international investors. This has provided a platform to bring the quality of KSMA's training to a global level. It is very important that Chairman of investor company Marlow Navigation, Mr Hermann Eden is present here at today's event."

The President added that the fact that a large number of Ukrainians, both male and female, continue to aspire to become cadets, clearly meant that there is firm belief in the traditions and fantastic future of the country's maritime sector, which will no doubt continue to play a pivotal role in supplying the industry with qualified marine officers. The President noted that many foreign students also study at the academy, further testifying to its international reputation and accreditation.

Following the occasion, Marlow Navigation's Chairman, Mr Hermann Eden was awarded with a Distinction of Honour by the Kherson Regional Council and Regional Administration in recognition of his and the company's considerable contribution to the economic development of the region, and in education and training of



Marlow Navigation and KSMA signing to continue their cooperation in cadet training

highly-qualified maritime professionals. The award was presented at the hall of the Kherson Regional State Administration, where Marlow and KSMA signed an agreement to continue their longstanding cooperation in training and employment of maritime officers.

"It is a privilege to accept this recognition on behalf of Marlow Navigation. As a company, we are proud to be cooperating with KSMA for over a decade now in the training of seafarers and recruitment of cadets," stated Mr Eden. "Ukraine continues to be the largest provider of deck and engine officers for our company, and we look forward to preserving this excellent collaboration."



Marlow Navigation's Chairman, Hermann Eden, awarded with Distinction of Honour

NEWS & EVENTS - YEAR IN REVIEW

UMTC CERTIFIED FOR HACCP & GMP

UMTC becomes the first maritime training centre in the Philippines to be certified for HACCP and GMP following successful completion of its fourth and final audit.

United Marine Training Center (UMTC) has become certified in Hazard Analysis Critical Control Point (HACCP) and Good Manufacturing Practice (GMP) by SGS, a leading Swiss-based third party certification and verification organisation.

This makes UMTC the first and currently only maritime training centre in the Philippines to achieve this certification. HACCP and GMP are both international quality systems provided by independent third party organisations.

“HACCP certification enhances our food safety management systems and product quality, whilst GMP ensures the integrity of food manufacturing process, as well as our compliance with food safety regulations,” stated Managing Director, UMTC, Donald Bautista.

“These achievements represent the culmination of two and a half years hard work by the entire Culinary Team, led by CTD Manager, Chef Jose Gabriel Prats and the Quality Assurance Team, led by QA Manager, Jeniffer Remoroza, together with our Training Director, Anthony Noakes,” he added.

HACCP certification is an international standard defining the requirements for effective control of food safety. In its systematic and preventive approach to food safety it goes beyond inspecting finished food products, but detects, corrects and prevents hazards throughout the



Ship's Cook training at UMTC, Manila

food processing process. It addresses the food safety culture of the whole organisation - from top Management to the cook trainees and culinary staff preparing and serving meals at UMTC.

GMP provides independent verification and certification that the basic manufacturing practices and prerequisites necessary for the implementation of an effective HACCP food safety program are being followed. It is a system addressing the hazards associated with personnel and environment during food production, such as premises, equipment or personal hygiene of staff.

“These international certifications further demonstrate to clients and partners the commitment to producing and trading in safe, high quality food, as well as training in these areas. Well done to the UMTC team for their ongoing professionalism and excellence,” said Training Director, Marlow Navigation, Joern Clodius.



UMTC Culinary and Quality Assurance teams, together with Training Director, Anthony Noakes, who were the main drivers for successfully achieving HACCP and GMP certification

Marlow seafarers undergoing PDB version 5.0 in classroom training



“We’ve been creating our own unique PDB and revising it each year to ensure necessary industry and company-related topics are well covered prior to our crew’s deployment”

PDB TRAINING FOR CREW

Marlow Navigation’s Pre Departure Briefing (PDB) version 5.0 was rolled out early in 2019, updating seafarers and preparing them for their voyage at sea.

The PDB acts as an efficient learning curriculum for seafarers’ daily work. It aims to familiarise crew with company information, procedures and requirements, as well as updates to maritime rules, policies, and regulations.

All Marlow crew are required to undergo this PDB version 5.0 training. This can be done via two methods: Classroom training, available via various Marlow offices around the world, including in Ukraine, the Philippines, Gdynia in Poland and Marlow Russia offices in Saint Petersburg and Rostov on Don; or otherwise as self-study via Marlow’s available on-line platforms. Once completed, seafarers are issued with a certificate of completion.

“We’ve been creating our own unique PDB and revising it each year to ensure necessary industry and company-related topics are well covered prior to our crews’ deployment,” said Crewing Director, Marlow Navigation, Captain Frank Brodersen.

Content is carefully selected and developed as per rank, and put together in an orderly and user-friendly manner, allowing information to be easily followed and absorbed. Like in previous editions, this includes more dynamic and engaging presentations, multimedia, as well as case studies.

“We strongly believe in the importance of case studies as a way of learning and improving based on past experiences. These case studies are based on real incidents. If crew are attending a classroom based course, it is highly recommended that these cases are openly discussed,” added Brodersen.

In addition to important updates regarding new rules, regulations and inspection guidance, the PDB again focussed on crew welfare issues such as bullying and harassment, as well as mental health.

As always, the company encourages and values feedback from crew, so as to ensure the PDB continues to evolve into an even more effective and useful learning experience.

NEWS & EVENTS - YEAR IN REVIEW

CREW COMPANION – NEW APP FOR MARLOW SEAFARERS

Marlow Navigation is launching a new unique mobile application for crew, which will be available on both iOS and Android platforms.

This new Marlow App for mobile devices, called CrewCompanion, has been created specifically for Marlow seafarers to help make the working experience while ashore and at sea more dynamic and efficient, as well as more enjoyable.

As part of the first release, a range of features will make a big part of the administration process between Company and Crew much easier. For instance, information and material will be synchronised with the seafarer's device (tablet or phone), when connected to the Internet.

Users can enable alerts and notifications to stay reminded and updated on important issues, such as new assignments, flight details, payslips and expiring documentation, amongst others.

From a training point of view, seafarers will be able to view all their course certificates. Additionally, they will be able to check which courses they are required to attend prior to their next assignment.

For added convenience and in order to improve communications, important contact information as relevant to their assignment will be available via the App. Other key features will include a vessel tracker, latest company press releases and the official Newsletter. Furthermore, it will boast a new innovative social tool which will allow seafarers to



connect and interact with other Marlow crew within their vicinity.

In the next version of the App we plan to focus more on training related issues. Some ideas presently under consideration include:

- seafarers being able to check their compliance with the Marlow Training Matrix
- Schedule and book trainings directly with Marlow's facilities
- Check for 3rd party training options, and
- Undertake self-study courses directly via the App

CrewCompanion is all about enhancing organisation and interaction, whilst supporting seafarers in their work, training and day-to-day life. The App will be accessible for all seafarers engaged with Marlow, with secure login and is free of charge.



MANNING AGENCY CONFERENCE: “CREW AGENCIES ARE THE MOST VITAL LINK TO SEAFARERS”

Marlow Navigation’s Manning Agency Conference took place at the end of March this year, held at the group’s head office in Limassol, Cyprus to present and discuss major industry updates, company developments and crewing operations.

Over 100 people attended the two-day event, including group management, departmental heads, crewing superintendents and operational staff, as well as representatives of agencies throughout the global network.

Joint Managing Director, Andreas Neophytou officially welcomed all participants and provided an update on Marlow’s latest developments and an outlook ahead. “This is a unique opportunity to meet in person and discuss matters of mutual concerns. Since our last manning agency conference, there have been numerous changes in our industry, which one way or another have or will influence our group’s operations. However, what remains central to our business are our crew agencies, the most vital link to seafarers,” he said.

The conference is usually held every two years to present and discuss major industry updates, company developments, as well as local issues at an agency level and how they are being confronted. The main focus is on operational and general issues that affect seafarers, such as recruitment, administration, as well as education and training.

“Our manning agency conference is the ideal opportunity to gather everyone together to cover the many important issues we’ve faced over the last years and provide a platform for dialogue and an exchange of ideas going forward,” stated Joint Managing Director, Marlow Navigation, Jan Meyering.



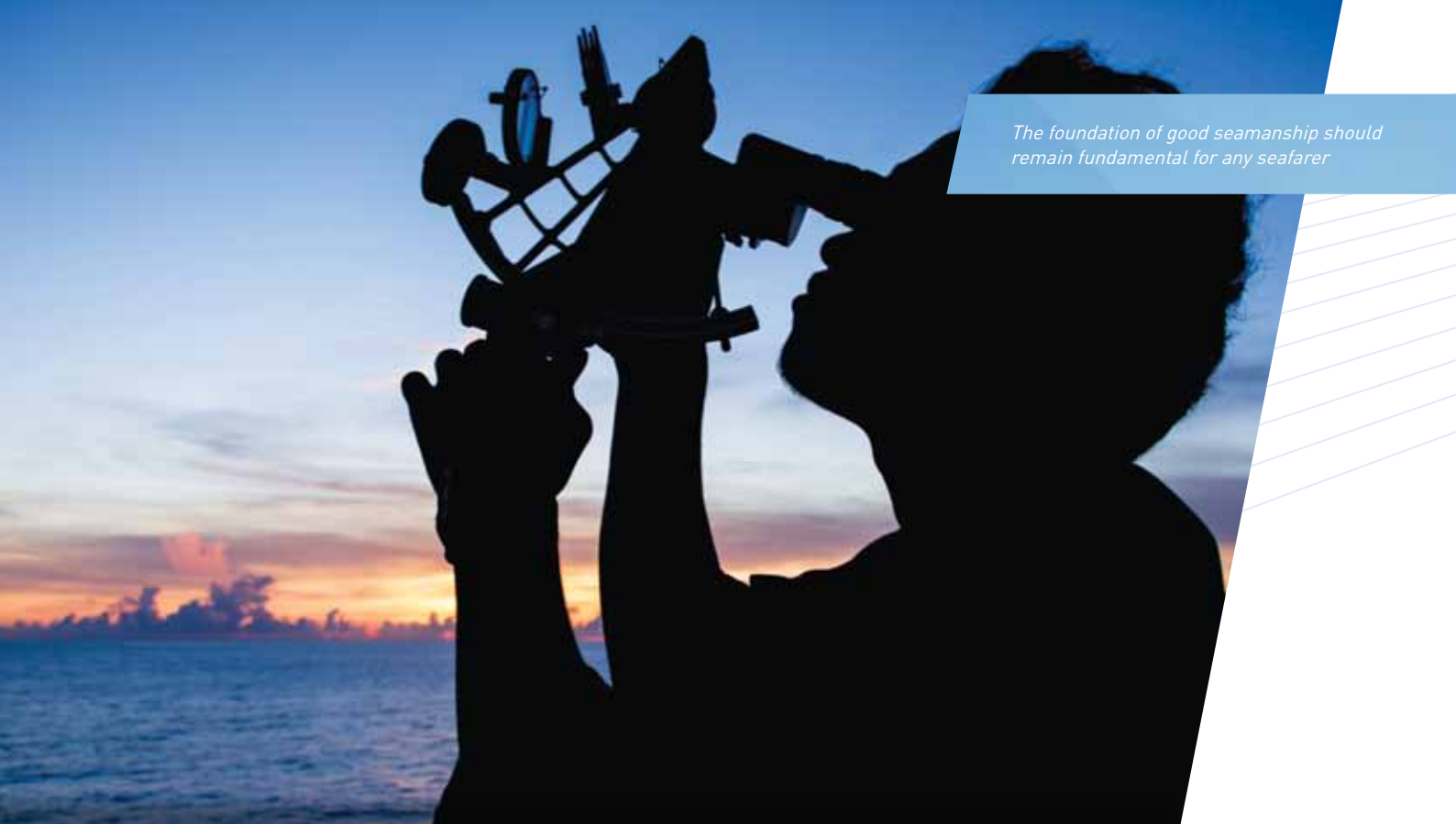
Marlow’s Manning Agency Conference at the group’s head office in Limassol, Cyprus

A number of new exciting developments happening at Marlow with digital innovation were also presented this year, which will no doubt have a positive impact to overall processes and ultimately to the service delivered to seafarers and clients alike.

“This year’s conference has been extremely productive and beneficial, covering many important topics in our crewing operations, as well as presenting exciting new developments,” said Crewing Director, Marlow Navigation, Captain Frank Brodersen. “What was also clear throughout our discussions is that despite a fast-changing landscape in technology and communication tools, the in depth knowledge and personal contact our agencies have with the seafarers is and will remain fundamental to the evolution, enhancement and growth of our crew management services.”

Participants of the 2019 Manning Agency Conference





The foundation of good seamanship should remain fundamental for any seafarer

Even with advancements in marine technology and a new generation approach, good seamanship must remain fundamental for any seafarer. This can only truly be acquired through real work experience and the traditional mentorship at sea.



Teamwork - simply the fellowship at sea

BACK TO THE BASICS - SEAMANSHIP

Opinion from Marlow Navigation on the importance of seamanship and why it should remain central to maritime training and development.

The art of sailing a ship - cause and effect

The profession of the seafarer is one of the oldest in the world. One of the first known definitions of seamanship dates back to the 18th century: *the skill of a good seaman; the art, or skill in the art, of working a ship*. Back in the 'glorious old days, when the seas were higher and the work was tougher', the career of every mariner began directly on board. Here, they would be introduced to the art of sailing a ship.

They did not have the luxury of set standards, nautical competencies, nor any prior studies and training ashore. Learning and discipline happened slowly over time, on-the-job and by seniors passing on their trade and wisdom.

During these times, best maritime safety practices were rather straightforward: survive bad weather, stay clear of shallows, avoid pirates and ultimately get back safely to home port. There was only one golden rule to follow: Good Seamanship.

Seamanship and its interpretation evolved over time, greatly influenced by the development of marine technology. As tall ships phased out at the beginning of the 20th century and we entered the era of engine-propelled vessels, seafarers had to obtain theoretical knowledge and a higher level of education in advance. Nautical studies were introduced at colleges, combined with sea survival training, safe ship handling and marine engineering.

What came with this added education, however, was to an extent lost in the traditional and indispensable practice of transferring knowhow and skills from an experienced mariner to the apprentice. Something that directly nurtures seamanship.

Beyond maritime education and qualifications

The STCW Convention established basic requirements on training, certification and watchkeeping for seafarers on an international level and while such efforts are well intentioned and still necessary, we would all agree that a certificate of competency is simply not enough. The reality is that standards and conditions still differ by country, as indeed they do by training institutions and shipping companies.

Gaining knowledge and skill, as required to achieve STCW competences, does not teach or certainly does

not substitute the practical and "hands on" aspects of the job. Knowledge and skill can come from education, but a seafarer's attitude and experience, can only truly be developed with real life work.

Competency as expected by the industry consists of knowledge, skill and attitude. However, it is up to industry to bridge the gap and create an environment that provides young mariners the opportunity to gain this extra and most vital dimension to training. A culture must be built on board and ashore at a management level that supports the good spirit of learning and training.

The key element here is "mentorship". Like in the days of old, a pact by which experienced mariners help, teach and guide those new to the job.

Such leadership no doubt starts at the very top and sets an example that trickles down. Good leaders at sea respect and appreciate their teams, share knowledge, listen, motivate, and delegate tasks effectively and in a way that promotes ownership and responsibility. The reward is tenfold, as individuals and the team overall progress better and ultimately become more productive and safer.

New skills within old traditions

Looking ahead, the future of the maritime profession certainly looks interesting, particularly as technology continues to evolve fast, such as in automation and digitalisation. It also raises some concerns.

No doubt, technology will increasingly change the role of a seafarer, especially officers, moving away from that of doing to that of monitoring. At the same time, roles are becoming highly specialised and a lot more complex. Future marine professionals must have multi-disciplined higher education, as well as a range of new soft skill requirements, such as interactivity, data analytics, modern communications, as well as new forms of critical thinking.

Such new requirements are being taught at colleges and then later applied at work, upgraded and trained. However, we must also be wary of what this advancement might restrict. Asking seafarers to learn an increasing array of new technical skills, and in short time, creates the risk of overloading and perhaps skipping, or at least undervaluing, some other basic skills.

We must not neglect the traditional human elements of the job, such as good interpersonal skills and teamwork – put simply the fellowship at sea. Together, these make up the foundation of good seamanship, which should remain fundamental for any seafarer.

EQUIPMENT & FACILITIES

DEDICATED SCIENCE PARK ESTABLISHED AT KSMA

In February this year, a Science Park opened at Kherson State Maritime Academy (KSMA), established with the support of Marlow Navigation and under the decree of the Ministry of Education and Science of Ukraine.

"This new initiative provides the opportunity to expand the scientific research and development capacity of KSMA and to implement innovations in the marine industry," explained Rector of KSMA, Dr Vasyl Cherniavskiy. "Making greater use of available scientific potential, the Science Park will facilitate the flow of knowledge and technologies between the academy and industry, domestically and internationally. We are grateful to Marlow for their ongoing support and in helping to create such new advancements in maritime education and training," added Rector Cherniavskiy.

By creating an atmosphere dedicated to maritime science, this new enterprise will also assist in the advanced training and professional enhancement of marine specialists, whilst helping to address current and future industry interests. For instance: alternative energy propulsion systems; automated devices in navigation and ship engineering; development of respective software and control devices; improvement

of economic and ecological results in the functioning of ship power plants and electromechanical systems; environmental protection issues in marine transport operation; and innovative projects and expert assessment of emergency situations in marine transport.

KSMA and Marlow have been strategic partners for over a decade and have realised a range of initiatives aimed at the enhancement of education and training facilities, as well as in the appliance of competency-based approach in training of maritime professionals.

This included another innovative project back in 2010-13 with the Development of heavy lift and off-shore wind farm expertise in Ukraine, co-financed by the German Development Finance Institution - Deutsche Investitions- und Entwicklungsgesellschaft GmbH (KfW DEG) to the German Federal Ministry for Economic Cooperation and Development (BMZ).

Such cooperation and investments have made KSMA an exemplary institution of higher nautical education in Ukraine that has successfully integrated the European Higher Education model. From a wider perspective, it ensures the global competitiveness of Ukraine and its sustainable development as a marine state and source of highly qualified and skilled marine professionals.



New method for advanced dual mode distant teaching introduced at the Science park, KSMA

NEW SIMULATORS AT UMTC

United Marine Training Center (UMTC) in Manila continues to upgrade its training offering by introducing new state-of-the-art equipment.

Rick Hartley Consultancy Inc. hosted at UMTC has recently installed a new ballast water system simulator Pure Ballast 3. This new system creates the opportunity for advance training and provides crewmembers the confidence in operating and maintaining a PureBallast 3 system. It combines theory and hands-on operational exercises with a full-scale system.

This training is critical for ballast water treatment systems operation. IMO's Ballast Water Management Convention includes references to such training requirements. Guidelines G4, for instance, explains that a ship's Ballast Water Management Plan "should include training and education on ballast water management practices and the systems and procedures used on board the ship."

UMTC is also in the process of installing a Transas high voltage simulator system including high voltage training breaker. This new installation is in line with the latest international and national standards for

effective simulator training of Electro Technical Officers (ETO) and other management and operational level engine personnel.

This training aims to enhance the competency and proficiency of engine personnel in the safe operation, testing and maintenance of high voltage electrical systems on board ships and was designed as per the requirements of the Philippines Maritime Industry Authority (MARINA) training standards and as set out in STCW 2010.



New ballast water system simulator at UMTC

KMSTC OPENS ADDITIONAL PREMISES

Kherson Maritime Specialized Training Centre (KMSTC) has recently opened a new modern training premise, in operation since January 2019.

The new premise is located in the centre of Kherson and in walking distance to Kherson State Maritime Academy (KSMA). It has a total area of 240 square metres and consists of three designated classrooms, thereby able to conduct several courses simultaneously, as well as a well-equipped briefing room, large reception area and catering facilities.

The training centre is already offering various global

standard quality training courses, namely: Admiralty Commercial Law, Environment Training Program, Bulk Carrier Course including Draught Survey and Grain Stability. Additional customised and offshore courses are planned to be introduced in the coming months and year.

"This new facility is in response to the growing needs of our industry. Together with our highly qualified instructors, our new premises allow us to meet even more prospects and deliver high quality solutions for maritime professionals," stated Centre Manager, KMSTC, Captain Sergey Dudchenko.

Official opening of new training premise at KMSTC



TRAINING COURSES & SEMINARS

Each year, we present hereafter a list of some of the newly introduced courses at both our dedicated training centres United Marine Training Center Inc. (UMTC) in the Philippines and Kherson Maritime Specialized Training Centre (KMSTC) in Ukraine.

Both these training centres continue to uphold their position as leaders in maritime training in their respective markets, but also globally, always evolving and improving their standing via comprehensive and accredited training curriculums (programmes and courses), upkeep and renewal of state-of-the-art equipment and facilities, as well as further development of qualified instructors together with continued focus on outcome based teaching methodologies. This ensures each training centre continues to produce the most technically competent, skilled and high-quality marine professionals.



Proficiency in Fast Rescue Boat training

NEWLY INTRODUCED COURSES AT KMSTC

COURSE NAME	PILOT DATE
Safe Mooring Operations Course	JANUARY
Assessment for Deck and Engine Officers, customised course	JANUARY
Open Water Diver including range of specialisations	SEPTEMBER
Proficiency in Fast Rescue Boat	NOVEMBER
Restricted GMDSS operator	NOVEMBER
Hazmat	NOVEMBER
Training of passenger ships personnel	NOVEMBER
Medical care on board	NOVEMBER
BOSIET Digital Delivery	DECEMBER

Country Manager Cyprus, OPITO, Chris Wright:

“KMSTC represents the embodiment of an OPITO approved training facility delivering approved training at the highest level on a global stage.”

NEWLY INTRODUCED COURSES AT UMTC

COURSE NAME	PILOT DATE
ME Electrician Standard Maintenance Course	JANUARY
Ship Fitter – Maintenance of Auxiliary Machinery	FEBRUARY
Ship Fitter – Maintenance of 2 Stroke Diesel Engines	FEBRUARY
Ship Fitter – Lathe Machine Operation	FEBRUARY
Engine Room Routines for Engine Cadets	APRIL
Electro-Technical Officer Comprehensive Assessment	JULY
Crane Maintenance and Troubleshooting	AUGUST
Practical Separator Training for Ratings	AUGUST
Fuel Management for Management Level Engineers	AUGUST
Maintenance of 2-stroke Diesel Engine Fuel Oil Injection System	AUGUST
BV Welding Trade Test Revalidation	AUGUST

Head of PrimeServ Academies in Denmark, MAN Diesel & Turbo, Tommy Rand Mølau:

“MAN PrimeServ Academies has been collaborating with UMTC for almost a decade to provide quality training locally in Manila Philippines. The team at UMTC always provides excellent and on time service for all of us at PrimeServ Academy. Our technical instructors always feel welcomed and we as a team feel that our enquiries are being prioritised. We value our collaboration and look forward to introducing further products locally in Manila, the Philippines.”

Electro-Technical Officer Comprehensive Assessment



TRAINING COURSES & SEMINARS

TOUR & LEARNING EXPERIENCE FOR CADETS

As part of the standard training curriculum in the Philippines, instructors from United Marine Training Center (UMTC) take fresh college graduates, new Marlow Navigation prospective officers, on board a crew managed ship to meet seafarers and conduct a comprehensive tour of vessels.

Tours include the Navigational Bridge, Cargo Office, accommodation, the entire deck, as well as engine control and steering gear rooms.

With this, cadets have the opportunity to observe the ship's operations, ask questions and take back notes for classroom lessons, helping to better

understand and consolidate the theoretical aspects of their training.

This is always a very helpful exercise for providing a more practical introduction to the shipping industry and supporting course delivery and educational development. At the same time, they get to see the ship's operation at a busy port, working with cargo, unloading and loading, whilst learning about the importance of shipping to the movement of world trade.

As always, we express our thanks to customers and crew on board the vessels we visit for their time and continued support of our training activities.



Marlow cadets conducting ship tours as part of the training curriculum

SAFETY, HEALTH & ENVIRONMENTAL MANAGEMENT TRAINING IN INDIA

Marlow Navigation India continued its Safety, Health and Environment Management training programme throughout 2018 for both seafarers, as well as shore-based employees, in efforts to further improve and upkeep best practices and enhance safety culture.

For seafarers, a great deal of training on ship safety and environmental protection was conducted on board during visits by technical and marine superintendents. This included theory/knowledge-based workshops, case studies, demonstrations and practical exercises/drills.

During these onboard sessions, training covered included topics such as bunkering and fuel change over procedures, record keeping and evidence, operation of centrifugal pump, gas instruments and their calibration, vetting and PSC inspections, accident investigations, ODMCS operations, Cargo Heating procedure, as well as a number of soft skill trainings, among other.

Meanwhile, training on Integrated Management Systems (IMS) was carried out for all shore-based employees in Mumbai. This included content such as: ISM code familiarisation; functional requirements of IMS; company's policies, responsibility and authority; emergency preparedness; and reports and analysis of non-conformities, accidents and hazardous occurrences.



Marlow India continues its onboard Safety, Health & Environmental Management training

MRM SEMINAR IN POLAND

Marlow Navigation has resumed its Maritime Resource Management (MRM) training in Eastern European major recruiting locations.

The first MRM course in 2018 took place during a senior officer's seminar in Szczecin, Poland in early October, held by clients Stargate Shipmanagement Germany and supported by Marlow Navigation Gdynia and third party partner agency Baltimex, and facilitated by Marlow's Crew Training Manager, Captain Martin Bankov. During the client seminar, a presentation was also given by Crew Superintendent from Marlow's head office in Cyprus, Pawel Graban.

MRM training forms part of the Marlow training matrix. The aim of the training programme is to

increase knowledge about human capabilities and limitations and to safeguard positive attitudes to safety and teamwork.

The MRM training will continue as part of the senior officers' seminars in other locations.



MRM training in Szczecin, Poland

“Marlow Senior Officer Seminars help enrich the relationship and trust between our people at sea and ashore, which is no doubt pivotal for safer and successful operations”

SENIOR OFFICER SEMINARS CONTINUE IN 2019

Marlow Navigation Senior Officer Seminars continue as part of the training calendar in 2019, taking place across all major recruiting locations, including Ukraine, Russia, Poland and the Philippines.

The seminars have been designed to provide senior marine officers an opportunity to further enhance contact with shore-based staff, encouraging closer and more personal exchange of information and feedback.

“This creates an ideal atmosphere for our officers and crewing agencies to get together, learn more about each other and promote proactive and valuable interaction in all areas of operations,” explained General Manager, Marlow Navigation, Captain Alfred von der Hoeh. “Despite the many technologies and channels for communication available, you simply cannot replace the benefits of direct and personal contact.”

Key topics covered during the seminars include:

- Latest industry and company developments, as well as providing updates on recent policies and current priorities

- General exchange of information and feedback from the vessels – improving connection between seafarers and shore-based staff
- Common problems on board and emphasising areas where immediate improvement is expected
- Incidents at sea and response procedures
- Crew evaluations, requirements and reporting procedures
- Crew training and mentoring
- Maritime resource management, and
- Media and social media awareness and handling

The Senior Officer Seminar initiative came about due to popular demand from clients and was first introduced in Ukraine in 2007. Due to its success, it was rolled out to other agencies around the world, developing into a well-established and highly responsive event on the Marlow training agenda.

“Marlow Senior Officer Seminars help enrich the relationship and trust between our people at sea and ashore, which is no doubt pivotal for safer and successful operations. They are an investment that further improves our crew management services by streamlining and enhancing efforts of ship and shore based staff,” concluded Captain von der Hoeh.

ANALYSIS

EMPOWERING SEAFARERS BY ADDRESSING THE SKILLS THAT MATTER MOST

Marlow Navigation and Safebridge recently concluded a two-year pioneering project using Empirical Research and Data Science to identify and address crew skill sets that will ensure safer and more efficient operations at sea. **SafeMetrix Product Manager, Safebridge, Dr Luiza Shahbazyan** offers us an analysis of this innovation and its positive results.



The maritime industry has a very complex and challenging nature. The latest technological advancements bring along new challenges that underline the need for understanding the associated risks, whilst adopting new and innovative procedures to address them.

No doubt, every part of the business boils down to people, and together with Marlow, we believe that understanding the human element is the key to a safe and successful future for the industry and the seafarers themselves.

During this two-year partnership, we combined our knowledge, expertise and resources to establish a leading industry standard. With over 50,000 professional skill sets out there, we embarked on a journey to better understand and quantify which skills in particular seafarers should possess to ensure their well-being on board, as well as to develop into even more reliable and competent crew.

The process began with sourcing the data to build a large enough sample size for mapping and benchmarking. This was initially done via a series of online surveys and personal interviews, where seafarers of varying demographics and ranks were asked to identify which soft and cognitive skills they considered important for their safety and performance on board.

Analogical opinions of the employers were then obtained and integrated, deriving a shortlist of the most commonly recognised and aligned skills. This allowed us to prepare and conduct a pilot test involving active seafarers, with the data generated forming the basis for constructing industry and rank-specific norms.

The results were conclusive and showed that there is indeed a strong and increasing demand for non-technical skills. These were then broken down into the two sub-categories of soft and cognitive skills.

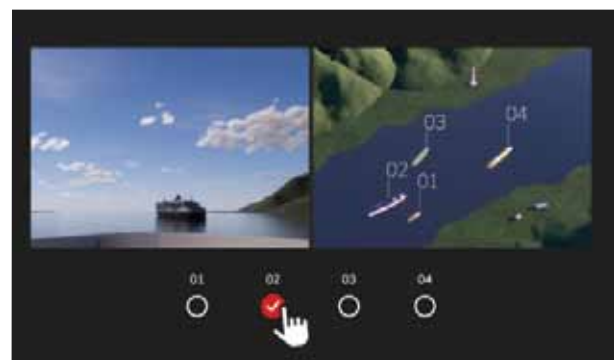
All data was collected, processed, and two optimal psychometric assessments were established:

MET-3S: Soft Skills for Seafarers – assesses the soft, non-technical skills of the crew, covering three

clusters of skills identified to be critical for high performance on board: Coping under pressure; Interpersonal skills; and Self-management.



This chart is an example of the possible setup, measuring a seafarer's results in Stanine [1-9] for each soft skill against the passing benchmark set by the company.



Screenshot of a task on spatial orientation, one of the four skills assessed by MET-CSS. Here, the seafarer must associate the correct vessel that has this view from her bow.

Understanding the human element is the key to safer and more efficient operations at sea

“ No doubt, data science is revolutionising the way shipping companies can evaluate the skills of their crew, making it more transparent, fair and controlled ”

MET-CSS: Cognitive Skills for Seafarers – a series of tests addressing the key cognitive functions that underlay the successful performance on board, namely how the surrounding environment is perceived, processed, and acted upon by the seafarer.

To further verify the validity of the data produced, we performed follow-up interviews with senior officers to confirm that their assessment scores corresponded to the skills they demonstrated during the structured interview.

No doubt, data science is revolutionising the way shipping companies can evaluate the skills of their crew, making it more transparent, fair and controlled. Such assessments provide otherwise hard-to-obtain information and results, and allow companies to have a complete and accurate understanding of the seafarer's profile, whilst compensating any potential interviewer bias by utilising standardised data and processing. Most importantly, they provide insights to support the correct placement and development of seafarers, thereby ensuring their safety and well-being on board.

Both assessments are hosted on “SafeMetrix”, an on-line platform developed by Safebridge, with functionalities designed to address the immediate requirements of companies operating in the maritime industry.

The platform is entirely web-based, user-friendly and allows for efficient administration and management of the assessments, together with setting company-specific standards, as well as immediate and visual reporting for better informed crewing and training decisions.

Established as one of the leaders in the maritime industry, Safebridge offers the whole chain of digital human resource competence management. The company provides online, generic and type-specific training, promotion and assessment for seafarers, professionals and individuals in order to improve their skills and get certified, with cutting edge IT solutions for E-Learning, E-Assessment and E-Certification.

Marlow seafarers conducting the online assessment





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RESOLUTE & CONTROLLED

Key performance indicators across Marlow Navigation's global training activities have remained robust, with continued commitment and overall solid performances in all areas.

The number of active seafarers out of the training programme reached over 5,200 among 13,000 total crew on board at the beginning of 2019. The goal is of course to maintain this successful trend of fostering talent from a designated and in-house training structure. Not only does this ensure seafarers are qualified, skilled and competent as per our company's and indeed client's strict requirements, but it also forms the basis for encouraging loyalty and in turn sustaining higher crew self-sufficiency. Of course this is fundamental in promoting experience, proficiency, and specialised know-how.

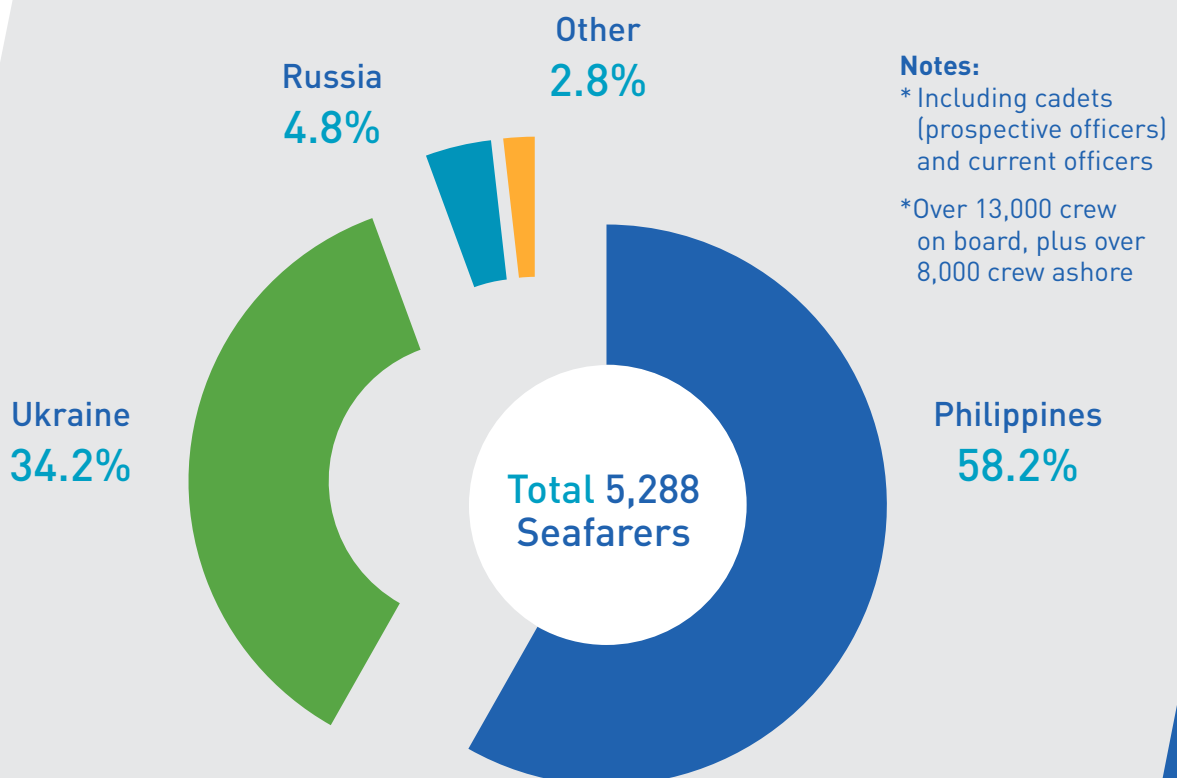
In terms of nationality breakdown, the Philippines continues to represent the bulk of these seafar-

ers, making up just over 58%. Our longstanding and strong presence in the market here as a crew recruiting, managing and training specialist, together with our close partnership with the contemporary United Marine Training Center (UMTC) being the corner stone.

Ukraine follows at just over 34% share, which is a slight increase compared to the previous year. Indeed, training activities in Ukraine have remained strong over recent years, supported by our enduring collaboration with training partners Kherson State Maritime Academy (KSMA) and Kherson Maritime Specialized Training Centre (KMSTC). We could continue to see a small growth in Russian seafarers out of training in the coming years, following a new cooperation with Admiral Ushakov Maritime State University (AUMSU) in Novorossiysk, particularly for cadets (see **figure 1.1**).

ACTIVE SEAFARERS OUT OF TRAINING PROGRAMME BREAKDOWN BY NATIONALITY (AS AT JANUARY 2019)

Fig. 1.1



FACTS & FIGURES

The trend of officers on board out of the training programmes has also remained consistent compared to the previous year and continues a gradual growth **(figure 1.2)**. Ultimately we have already reached our initial goal of one third of all officers coming from training programmes. This should remain more or less stable for the short- to mid-term, mainly due to having more or less the same number of onboard opportunities for prospective officers to progress through the ranks, particularly in operational level positions.

The trend should recover somewhat in 2020/2021 and thereafter, slowly climbing towards a longer term and seemingly ambitious goal of half of all officers on board. Certainly there is no shortage of willing and capable talent in both our key source locations of the Philippines and Ukraine, but also in Russia and in other countries. Together with a well-structured and proven system to ensure they are adequately educated, trained and developed, this goal is not only realistic, but from a wider industry perspective, a necessary benchmark.

The main challenge continues to be creating onboard opportunities for such trainees, thereby providing them with the essential sea-going practical experience in order to follow through their career development path in good time.

These present restraints have however been well observed and known for some time. As such, we continue to evolve our model and processes in order to better cater for current industry conditions.

For instance, not long ago we decided to adapt our prospective officers training programme in the Philippines by introducing shorter contract periods, therefore also reducing the time intervals between class-based training and on board practical experiences. This then allows our crew managed vessels some leeway to offer more onboard possibilities. At the same time, it has proven to help trainees with their development by better complementing the information and skills learnt at their training centre with that of on-the-job experience at sea, keeping it all dynamic, fresh and even more relevant.

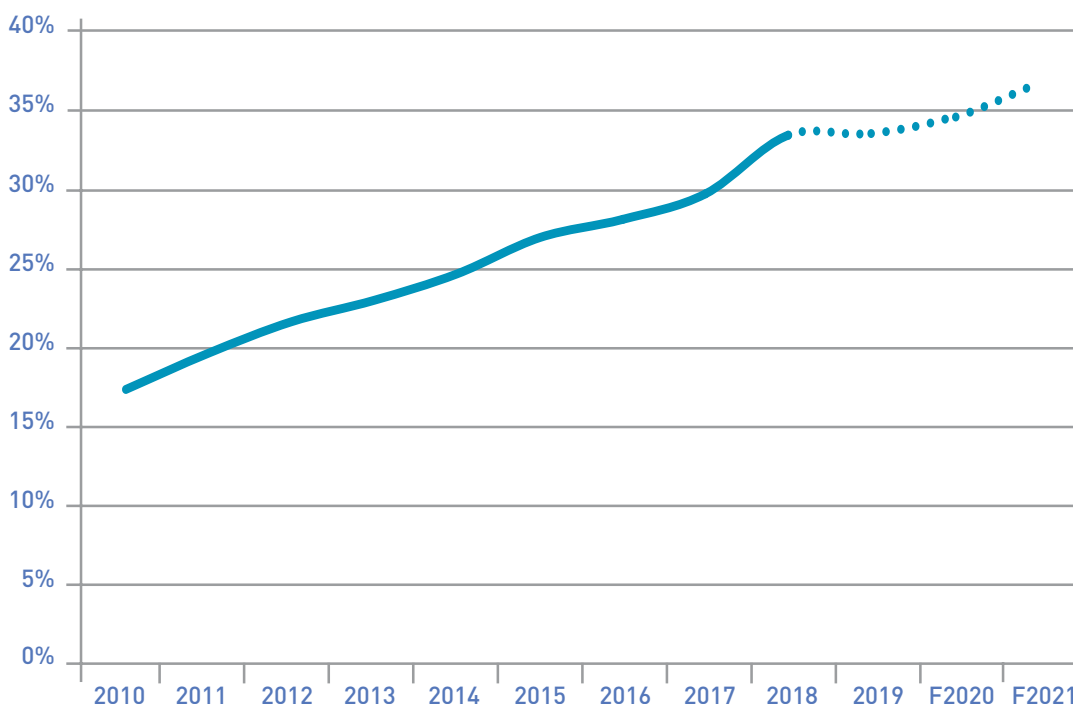
Nevertheless, results from these training initiatives are still rather optimistic, with promotions continuing along a steady path **(figure 1.3)**. In 2018, there were 258 promotions of Operational Level Officers to Management Level Officers, 381 promotions of Prospective Officers to Operational Level Officers, and 57 culinary trainees to cooks. Meanwhile, there were a total of 663 new cadet intakes into the programme.

Finally, as part of our Company's standard training matrix for seafarers, upgrading courses for all ranks remained strong at over 142,000 course attendances for the year **(figure 1.4)**. This covers mandatory, priority/required by the company and recommended modules. Such training takes place across our major recruiting locations, namely the Philippines, Ukraine, Russia and Poland, and includes classroom lectures, workshops, laboratory lessons, seminars and CBTs.

Percentage
in relation to
total officers

OFFICERS ON BOARD OUT OF TRAINING PROGRAMME

Fig. 1.2



Representing
over 1/3 of total
officers on crew
managed fleet

**Constant
Supply of certified
officers**

TRAINING INITIATIVES INVESTING IN HUMAN CAPITAL

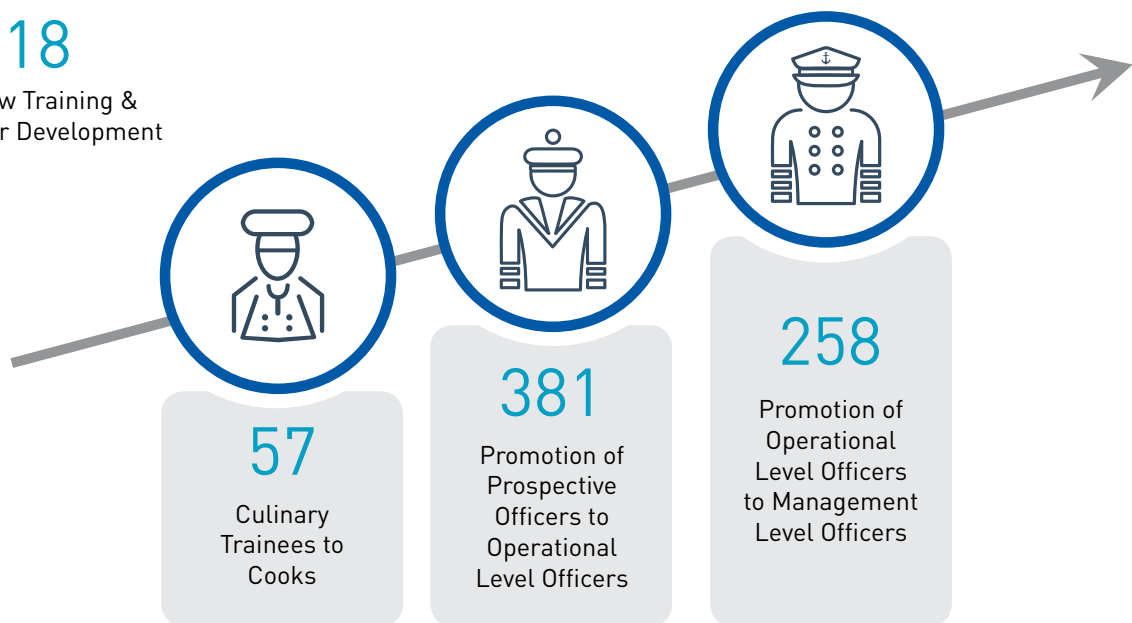
Fig. 1.3

663 Total New Intakes

Sponsored & non sponsored, including Deck, Engine, Electro Technical and Culinary

2018

Marlow Training &
Career Development



UPGRADING TRAINING ALL MAJOR WORLDWIDE LOCATIONS

Fig. 1.4

142,336

TOTAL COURSE ATTENDANCES IN 2018
AVERAGE OF 545 ATTENDEES PER DAY

- 1 Mandatory
- 2 Priority/Required by Company
- 3 Recommended

TRAINING OPPORTUNITIES

VITAL TRAINING BALLAST WATER TREATMENT

Alfa Laval, a marine supplier with over 100 years of experience, is at the industry forefront with its ballast water treatment solution, Alfa Laval PureBallast 3. **Martin Melin, Alfa Laval team leader for PureBallast training**, shares his thoughts on training's importance in a new and critical application.



Knowledge for a new era

Ballast water treatment is a new demand on the marine industry that has been introduced over a very short period of time. Vessels have utilised ballast water for many decades, but suddenly they're forced to manage it in a new way. Just as ballast water treatment is essential for the protection of our oceans, it's essential for everyone on board to understand the process.

The need for training cannot be overestimated. Perhaps 40,000 vessels will be retrofitted with ballast water treatment systems in the coming years. Each has a handful of personnel on board who must know how to operate and maintain the system, as well as a handful on land who will take over when the crew rotates. Not all crew members will receive direct training, but this says something about the massive injection of knowledge the industry requires.

More than a matter of routine

There's a sense of urgency in making all this knowledge available. With any new system, training is a prerequisite for optimising performance and safeguarding the equipment investment. However, a ballast water treatment system safeguards the vessel's own compliance. Marine authorities emphasise that lack of crew knowledge will not excuse non-compliant operation, and class societies also check that crews are sufficiently trained.

Although crews have been hearing about ballast water treatment for years, its implementation has come somewhat suddenly. Now that the legislation is being enforced, crew members must perform the operations for real. To do so correctly and consistently, they must understand how – but also why – the ballast water treatment system should be used.

Training on board

The most obvious – and perhaps most effective – place to train is on board. Training can be held at the time of commissioning, for example, by the service engineer who prepares the system for operation. After verifying the installation and testing the system, the engineer can guide crew members through its use and maintenance.

During onboard training, the trainees receive fully customised guidance. Not only do they work with their own system setup, they get to use it with their own ballast pumps and vessel control system in a familiar environment. So the actions they learn are the exact same actions they'll perform going forward, day in and day out.

The immediacy of onboard training, however, is also its potential downside. Other things may be happening on board that create noise, bustle and distractions. Moreover, onboard training is only possible for the crew that's physically present. Crew members who join the vessel at a later stage will need to be trained second-hand – or have gone through training elsewhere.

A mix of methods is the key

Fortunately, while the application is new, ballast water treatment systems are relatively uncomplicated to use. There are important differences between technologies, and ease of use varies from system to system. But training can and should be kept down-to-earth, promoting a broad understanding and the practical skills needed for crews to do their job well. Trainees should learn to use the system safely, efficiently and compliantly, and how to perform the maintenance that will keep it reliable over its lifetime.

To accomplish this effectively, it's important to Marine customers work in a shifting environment, where crews rotate and even the rules and their interpretation are subject to change. Likewise, the trainees themselves have different needs and different learning styles. To ensure optimal learning, retention and up-to-date knowledge, it's smartest to work with a mix of training types.



Learning the control interface for the ballast water treatment system

Training at dedicated training centres

For many, a course at a specialised training centre will be part of the solution. Although sending crew members for training is a time commitment, such courses provide a solid understanding of ballast water treatment and the practicalities of system operation. This is ideal for crews who will rotate onto a vessel where a ballast water treatment system is already in use.

At a purpose-designed facility, trainees can interact with system experts in a controlled setting that's optimised for learning. Ideally, the centre should offer possibilities not only to study the system in theory, but also to handle it in practice, whether in simulated or real form. Such hands-on work is always important in cementing theoretical knowledge. But it's especially important in a newer application like ballast water treatment, as it helps crew members overcome apprehensions and feel comfortable with the work – before they need to perform it on board.

Again, one-size-fits-all solutions are seldom perfect. So even within a standardised training course, it's good if there are opportunities to focus on different types of crew members and their specific needs. Likewise, trainers must be prepared to handle theoretical, regulatory and practical questions, extending well beyond the technical basics. Simply leading trainees through a PowerPoint presentation will not produce the needed results.

Training with digital tools

A further – but so far underutilised – possibility is digital training. This has been largely absent when it comes to ballast water treatment, despite the fact that 70% of respondents in the 2018 MarineLink Survey Report anticipate an increase in e-learning and simulators. Some time ago, Alfa Laval introduced PureBallast 3 Computer-Based Training (CBT), which acts as an online/offline complement to face-to-face courses. It remains a unique initiative, for which we've received a great deal of positive feedback.

A digital tool cannot replace an expert trainer, who can pick up on specific needs or address the changing nuances in the regulations and their interpretation. However, it can introduce and reinforce the key concepts of ballast water treatment and system operation. PureBallast 3 CBT, for example, comprises a self-study phase, a 3D simulation and a final knowledge assessment, which trainees can complete at their own pace.

Since it can be used anytime and anywhere, a digital training package supports the trend towards micro-learning and can help to develop and maintain the competence of crews over time. New crew members can learn the basics prior to a face-to-face training or going on board, while previously trained crew members can use it to refresh and reinforce their knowledge. Likewise, it can help address the learning expectations of millennials, who by 2020 will make up 75% of an increasingly diverse and multi-generational workforce.



In a purpose-designed facility, trainees can interact with the system in a controlled environment

Simplifying by design

Whether physical or digital, crew training provides confidence in operating a ballast water treatment system and complying with ballast water treatment regulations. There is, however, yet another form of training that can make life easier for crews.

For many years, Alfa Laval has provided engineering training to the companies who integrate PureBallast 3 systems on board. These three-day courses give engineering companies deep familiarity with the system concept and design, as well as the best practices learned in over a decade of PureBallast installations.

Courses of this nature simplify ballast water treatment operations from the design stage. When allocating space and preparing the connection of pipework, power and other systems, engineering companies can ensure that the ballast water treatment system will be a smooth fit for the vessel – and therefore easier for crews to work with.

Training with Alfa Laval

In time, the engineering and use of ballast water treatment systems will be a familiar part of the marine industry. But today's uncertainty and apprehension make thorough and well-organised training a high priority. As the system experts, suppliers should not leave this to others, but should rather be deeply involved.

Alfa Laval is committed to providing customers with a full palette of training options, which can be structured and combined in the way that best supports their needs and operations. We make our expertise available on board, on screen and in open courses at our dedicated training centres in Manila, Mumbai and Houston.

Each of our training centres is equipped with both a hardware simulator and an actual PureBallast 3 system, which makes our courses very hands-on in nature. Generally speaking, we divide the courses over two days, with the first day focusing on operation by deck personnel and the second day focusing on the maintenance and troubleshooting needs of technical personnel. Throughout, our experts share the insights and best practices Alfa Laval has developed in many years of work with ballast water treatment.

If you would like to enrol or wish to learn more about any part of our PureBallast 3 training offering, please visit www.alfalaval.com/marine-training

NEW RECTOR AT KSMA – LEADERSHIP IN MARITIME EDUCATION

Dr Vasyl Cherniavskiyi is the newly appointed Rector at Kherson State Maritime Academy (KSMA). He comes from a distinguished academic background, having dedicated his research and work to the maritime field, and authored over 60 publications. Together with extensive teaching experience, including a number of managerial positions at KSMA and various State committees, he is deeply familiar with the educational system and well positioned to bring forth a new dynamic perspective.



Doctor of Pedagogy Vasyl Cherniavskiyi, Rector, KSMA

The new Rector of KSMA, Dr Vasyl Cherniavskiyi comes from a more academic background, with wide-ranging educational qualifications. He is a graduate of Physics and Information Science, has a degree in Navigation and a Doctoral degree in Pedagogy. In 2017, he defended a doctoral thesis on Theoretical and Methodological Basics of Physics Teaching of Future Specialists of Sea and River Transport.

Since his fate as an academic has been directly linked to the maritime profession, Dr Cherniavskiyi considered it a necessity to not only acquire the relevant higher education and theory, but to also connect this with practical experience at sea.

His professional background in teaching is also extensive, serving as a member of the faculty at KSMA since 1999 and steadily climbing up the ranks where he has held a number of important positions, including Head of Navigation Department of Kherson Maritime College, Associate Professor, and Dean of the Navigation Faculty. Outside of the academy, he has also been a committee member and actively involved in a number of State departments, including the Sub-Committee for Sea and River Transport and the Methodological Board for Issues of Education, Ministry of Education and Science.

Now as Rector of KSMA, Dr Cherniavskiyi aims to further evolve the academy's prominence and capacities in the modern era by being even more responsive and innovative to changes and prospects in marine technology, international labour conditions, and better integrating theoretical education with practical and skills-based training.

A placid yet tenacious teacher and manager, Dr Cherniavskiyi's approach to education and training has over the years proven to be disciplined and inspirational to both colleagues and young maritime professionals alike.



Dr Cherniavskiyi greeting and awarding cadets at KSMA

“ The requirements for maritime professionals are evolving. We must stand ready to meet the current and future demands of the commercial maritime sector by being open, progressive and culturally well integrated ”

MAINTAINING CORE VALUES WHILST PREPARING FOR NEW POSSIBILITIES

There is a lot of discussion happening about how the roles and responsibilities of seafarers will change in the future, especially brought about by increasing levels of digitalisation and automation in maritime operations. Naturally, such changes in the industry will demand different skill sets and knowhow at sea. Although no one is exactly sure of how this will develop, what is for certain is that maritime training will be central to any transformation.

Apart from advanced ICT competencies, which will undoubtedly be a prerequisite for future marine officers, it is essential to anticipate what other new skills and in turn training will be needed for future job profiles at sea, and specifically those associated with new technologies. This way, our training remains at the forefront of the industry, producing the most advanced, qualified, and highly competent crew for our clients.

Another major, and more immediate challenge is that various marine Hi-Tech equipment manufacturers will be installing different types of systems on board vessels, with wide ranging setups, interfaces and functionalities. Seafarers will have to be well-trained and regularly updated in operating all this different equipment.

As shipping becomes more technical, the demands for highly skilled and specialised crew will also intensify, whilst seafarers will have to be prepared to develop new skills outside their traditional comfort zone. The good news is that there is an evolving generation of seafarers that are ready and eager for this challenge. These tech and digital natives consume and utilise information in a completely different manner. However, they also have certain expectations, such in their use of technology, interfaces and designs, whilst craving for more interactive and interesting learning experiences.

If we are going to get the best out of them, we need to stand ready to deliver. Our training methods must continue to adapt, with modern technological approaches and innovative new tools, such as interactive

and collaborative lessons, virtual reality and training in the most realistic scenarios, hands-on tasks, and of course more practical experiences at sea.

Overall, we must continue to be thinking differently about how to approach maritime training to meet such future challenges, and importantly to cater for a new type of seafarer. At the same time, we must not neglect the basic and traditional principles of good seamanship, which despite new technologies being available, remain the same.

Other key challenges identified include:

- Monitoring and measuring results of training so to continue evolving and developing the approach and curriculum, particularly utilising data science and analytics
- Enhancement of training simulators, and other new technologies such as virtual reality for providing the most realistic training scenarios
- Addition of technical upgrading courses relating to new environmental protection regulations, as well as soft skills training for Deck and Engine officers
- Greater on the job training, as well as mentoring programmes
- Consideration of expansion of premises in order to better cater for the introduction of new training possibilities, and scheduling to meet client demands
- Creating a new initiative together with various industry organisations for evaluating and enhancing the development of training centre instructors and faculty, and
- Introducing new tools and KPI metrics to evaluate training outcomes, effectiveness and overall return on investment



Adam Lewis and Marlow Navigation's Chairman, Hermann Eden at official opening of new English language lab at KSMA



“ I believe that over the coming years, the industry will adopt training regimes to allow younger seafarers to reach the levels of command at a much earlier age ”



Adam Lewis speaking at a seminar and launch of new marine training equipment and facilities at Kherson State Maritime Academy, Ukraine, together with Marlow's General Manager, Captain Alfred Von der Hoeh

PRESENT CHALLENGES AND FUTURE PROSPECTS OF MARITIME HUMAN RESOURCES AND TRAINING

Head of Training & Operations, International Maritime Employers' Council (IMEC), Adam Lewis.

Adam joined the shipping industry as a Deck Cadet and is a graduate in BSc (Hons) in Merchant Ship Operations from Southampton Solent University. He commenced his career ashore in a commercial operations department before moving into technical operations and spent over four years in the Royal Navy Reserves under the Maritime Trade Operations Branch (MTO). Adam joined IMEC in 2010, where he is now responsible for the coordination of the IMEC training initiatives, including the IMEC Cadet Training Enhanced Programme. He is also the Secretary of the IMEC Recruitment and Training Committee.



In general, what do you believe are the main challenges with maritime human resources and training at present?

We are in an exciting time in the industry at this moment, where a lot of developments are taking place. Ships are getting larger, cleaner and more sophisticated in terms of technology. This has the effect however, that regulation is struggling to keep up and the traditional 'unlimited' certificate of competency is quickly becoming something of the past.

To meet these challenges, we are seeing companies adopt training systems, not unlike the airline industry. Companies are taking qualified seafarers and enhancing their skills to make them far more competent than ever. This is not without considerable investment, but it will achieve excellence in the field of maritime training.

Tell us how IMEC is active in supporting its shipping members and seafarers alike to respond to such challenges and drive the industry forward?

IMEC's training department is all about sustainability; sustainability of standards and sustainability of the industry by supporting the next generation of seafarers. Outside of industrial negotiations, IMEC is best known for its enhanced cadet programme in the Philippines.

We also administer training funds in collaboration with the International Transport Workers' Federation (ITF) and The Associated Marine Officers' and Seamen's Union of the Philippines (AMOSUP), for the exclusive use of our members. Over the past 20 years, we have issued grants worth tens of millions of dollars, to ensure that our members can buy new training hardware to keep pace with the industry and to invest in new model courses.

How will the industry benefit from this new type of seafarer profile in the years ahead?

In 2011, I presented my first paper at the then Lloyd's Maritime Conference in Manila about seafarers and information overload. It was a subject that I spoke about for many years later, but announced at a conference in 2017, that it would be the last time I would speak about it. Why? Because although information remains to be presented to the seafarer in vast masses, our new generation of seafarers have the skills necessary to cope.

I'm the upper end of Generation Y and I'm a digital immigrant. I used the internet for the first time at 12 years old, where we had one internet accessible computer for a school of 1,200 pupils, which of course had a waiting list to use.

In 2018, we started recruiting Generation Z into the industry. By contrast, this is a generation which has always been 'connected' and will probably have never heard of dial up internet or Encarta CD-ROMs. This is a generation that has been brought up in a world with abundant information and they have the skills to quickly sort through all this information and decipher what they require. A sad picture is often portrayed of the modern family, sat around the tv, with the teenagers on their iPads. There is something slightly more clever about this scenario though; modern teenagers can quite adequately concentrate on a film on one screen, while on social media on another. Bringing this generation into the industry will bring significant advantages such as their ability to process large amounts of digital data at high speed, to ensure safe navigation.

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Like in other industries, notions of “automation” has fast become a buzzword in shipping and maritime, whilst raising prospects of both benefits and concerns. Where do you see this heading in the near future and how will this impact both shipping companies and seafarers?

‘Automation’ is a widely used term at this moment, but with no clear definition. Technology companies for example have rocked the industry in recent years by publishing their plans for fully unmanned vessels.

My take on the term automation is somewhat different. I personally believe that the shipping industry will take the same route as the space industry. At present there are 6 astronauts on the International Space Station. They are not there navigating the station, but are specialists in their field, conducting high profile operations. In the future, we may well have unmanned watches and we may not be putting people into enclosed spaces anymore, but I believe it’s a very positive time to be a seafarer, as onboard operations and thus training, will become more specialised.

What new exciting developments can we expect in future training practices and the employment of seafarers worldwide?

I’m not a big advocate of the traditional classroom environment for maritime training. We recruit individuals to become seafarers based on a range of skills including leadership, technical comprehension and an ability to think under pressure. I personally don’t believe that a lecture hall or a ‘chalk and talk’ classrooms are the best environments to develop these skills.

I am therefore very encouraged to see some of the modern technological training methods currently being developed. An example is virtual reality and IMEC is currently project managing one such project with three different companies, including Marlow Navigation. Instead of sitting students in a classroom, pointing to drawings of engine parts on a whiteboard, we’ll be able to submerge students into a realistic environment, where they will be able to see and hear the engine working.

Where do you see more investment needed with seafarer employment and training for the wider industry – resources but also awareness and responsiveness?

For many years we have had an industry wide issue of retention. The burden of being a seafarer is undoubtedly tough, especially when one has a family. Whilst experience is undeniably a key factor in reaching senior positions onboard, this buzzword ‘automation’ will help this industry in this regard.

I believe that over the coming years, the industry will adopt training regimes to allow younger seafarers to reach the levels of command at a much earlier age. Countries such as Germany already do this very well. Automation can help a less experienced mariner, reaching command much earlier. By forming a good human-computer relationship, computers can automate a lot of processes to allow a Captain to make more informed decisions.

Of course, training programmes will have to adapt to this. Cadets will have to be taught a mindset where they need to be ready for promotion to Captain in 10, not 20 years’ time. Simulator time will have to focus around decision making using all new available means and onboard mentoring will have to be enhanced.

Marlow Navigation has been effectively working to support the training, upgrading and education of seafarers through more than 20 training projects funded by IMEC and its affiliates during the last 12 years.

As a leading industry organisation, how do you evaluate Marlow’s overall approach and contribution towards the training of seafarers over the last decade, and what development and action do you envisage for the near future?

I’ve been fortunate enough to work closely with Marlow over the last decade. My personal evaluation is that it is a company that is proactive, rather than reactive. Regulations in the maritime industry can often be implemented 10 or more years behind actual industry requirements. Marlow is very good at analysing industry requirements and quickly implementing quality programmes to ultimately make shipping cleaner and safer. A programme I was particularly interested in over the past few years, was the Master – Pilot relationship course, where Marlow identified a common problem in the industry and took the initiative of designing a model course.



Participating at a maritime seminar in Singapore



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▀▀ **A long term vision:**
Our training activities have been set up to provide a holistic, constant & reliable option for supplying our crew managed vessels with well-trained, competent & skilled seafarers ▀▀

Offshore Crane Operator training



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