



All India Marine Pilots' Association



Providing Peek into Marine Pilots' World

ISSUE II

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**1000 WAYS TO SECURE A PILOT
LADDER and only one way
is correct...**
- Arie Palmers

Editor speaks on this Issue of Marine Pilots' Journal

Editor Speak

Good day to all readers!

This has been a fantastic month for AIMPA. We were at the peak of Publicity which is actually not our aim. Our new inaugural issue came out well and was appreciated all over in the shipping fraternity in India as well as abroad. People called in, appreciated the move, hoped that it would sustain and suggested topics for future editions. Gives a full feeling of satisfaction on seeing peoples' expectations from this journal. People in Ministry called to congratulate, and Someone said proudly 'this is the first journal in Indian Shipping'. Very flattering remarks for the editorial team, we were overwhelmed. AIMPA loves to be noticed by people in shipping.

Who is a maritime pilot?

Normally one would say he is a mariner having local knowledge and is expert in maneuvering the ships and of course is licensed to do so by a recognised authority. This might be a typical definition of a maritime pilot one may find in a textbook, but in my opinion there is something more to it. When it comes on ground level, unless the most expert Pilot has self awareness and domain awareness with a pinch of common sense, he will always find his expertise in limitation. In our first edition there was a wonderful quote by Admiral E J King which says "A great ship handler is one who does not come to a situation that requires great ship handling".what does it really means? This situation can only be avoided by awareness. Often times the ship and its cargo may be worth few million dollars, and the liabilities practically unlimited. In such a situation who would like to handover an asset of this magnitude to an ignorant expert, no matter how expert swimmer one may be but if he jumps in a pool of acid in ignorance, he is never going to make it. Anyways the loss and liabilities does not reduce by having an expert on bridge once vessel meets an accident. During my tenure as a pilot I have witnessed a number of such cases where most expert pilots got in to a situation just because they missed some information either non availability of tugs or mooring crew despite bringing vessel safely close to berth and ultimately resulting in an accident. In our opinion to be a successful pilot AWARENESS is the key.

The month was also a bit tough. One of the pilot at the point of disembarking fell off the Pilot ladder into the boat and suffered injuries, bruises. We panicked and tried our best to help. Upon seeing no fractures, we were relieved and had tears in one eye and another with happiness. Such is life, on one count it is tough and on the other count it is rewarding.

Life is to move on. Best part of the month as we received a lot of calls from pilots reporting about pilot ladder conditions. AIMPA aspires to digitise this reporting through an app. Every incident has a lot to learn. AIMPA has started a feature for lessons to learn from this month. Hope our maritime pilots report incidents and we can then learn a lot from them.

Wishing you all a Happy and safe piloting.

Marine Pilots Journal

Editorial Committee:

1. Capt Gajanan Karanjikar (President AIMPA)
2. Capt Vivek Bhandarkar
3. Arie Palmers
4. Ms. Reshma Nilofer
5. Capt Debashish Basu

Editor

Capt. Manoj Joshi and Bharati Bhandarkar

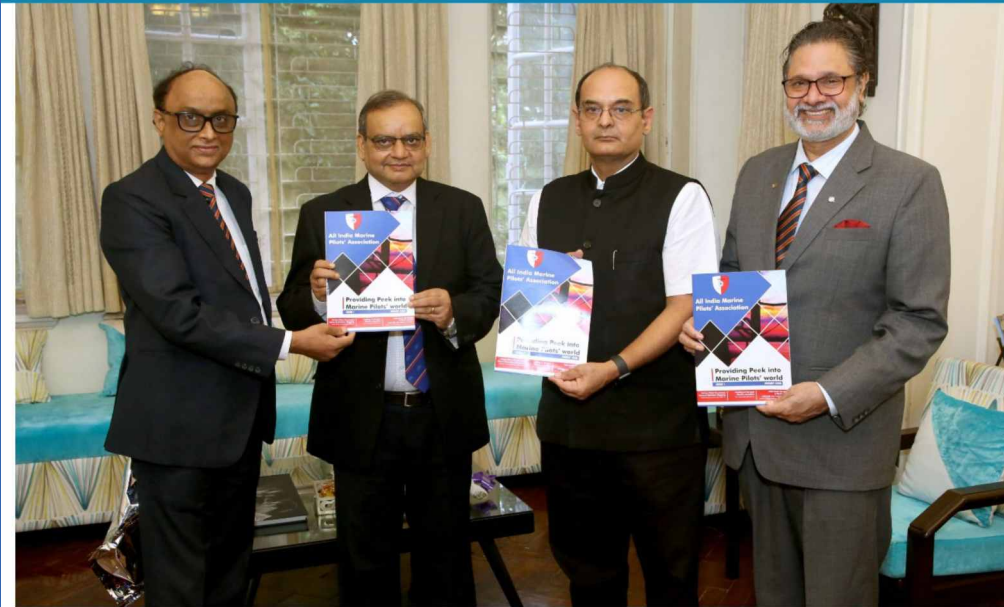
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1. Capt MM Saggi
2. Capt Ashok Mahapatra
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Your views can be addressed to Capt Gajanan Karanjikar, President AIMPA on
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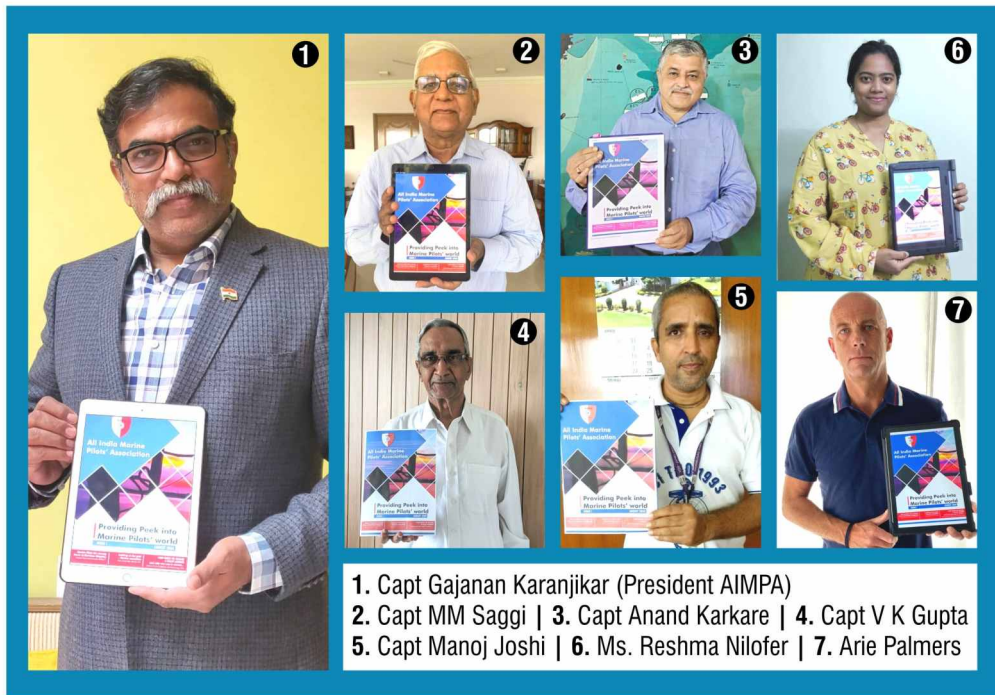
Shri Sanjay Bhatia releases AIMPA's maiden Journal



Capt. Vivek Bhandarkar, CEO Bhandarkar Publications, **Upendra Kumar**, from IMEI, **Sanjay Bhatiaji**, IAS, Former Chairman Mumbai Port & Indian Port Association inaugurating the Marine Pilots' Journal and **Capt M. P. Bhasin**, General Secretary CMMI.

Shri Sanjay Bhatia former Chairman of Mumbai Port and Indian Port Association (IPA) expressed pleasure while releasing the All India Marine Pilots Association's (AIMPA) maiden Issue of "Marine Pilot's Journal" and applauded the efforts in taking out this kind of Journal to help highlight issues of pilots. "This is a great initiative and it will go long way in improving the status of the Pilots" he added with enthusiasm.

Capt. Gajanan Karanjikar, President of AIMPA said "We are honoured that Shri Bhatia took time to read through the Journal and also discuss the Pilot's issues."



1. Capt Gajanan Karanjikar (President AIMPA)
2. Capt MM Saggi | 3. Capt Anand Karkare | 4. Capt V K Gupta
5. Capt Manoj Joshi | 6. Ms. Reshma Nilofar | 7. Arie Palmers

Shri Bhatia also complimented Mumbai pilots for having done maximum pilotages in the times of COVID compared to other ports in India. He applauded marine pilots' efforts and commitment to serve the country no matter what the situation. Shri Gajanan averred "We are sure the Marine pilots will have hearty day looking at their efforts being recognised.

"Pilots are well qualified and highly experienced to handle ships and engage in dare devil jobs in most dynamic situation 24x7. But, the Marine pilot community happens to be small and often neglected. This despite being important cog-in-the-wheel in cargo movement in ports and in turn in contributing to country's economy.

This marine pilot's Journal aims to give this small community of Marine Pilots an opportunity to come together and share their knowledge and experiences in the media.

It is not a news bulletin of pilots or ports, but a journal, which would bring about knowledge sharing among marine Pilots and also highlight their woes. It is a space where incidents and near misses can be discussed objectively.

The Journal will be published monthly with write ups that would include the contributions from pilots and all those who care about this community and want to share their knowledge.

When AIMPAA is constantly taking up pilots' safety and security issues, the journal would be another medium to put forth this information to general public as well. This effort will bring about an awareness and appreciation about the Marine Pilot's work among general port communities.

AIMPAA has sought help from Shri Amitabh Kumar, IAS, Director General shipping to take up issues of pilot ladder non compliances. Shri Kumar has readily taken proactive steps and asked that any Pilot Transfer Arrangement(PTA) related deficiencies to be brought to the notice of jurisdictional MMD's or the Port State Control (PSC) cell of the Directorate for taking necessary action.

This Journal aspires to be in the hands of law makers and make its presence felt in corridors of powers.

Capt. Gajanan said "We would request everyone to wholeheartedly support the unique efforts and contribute to the safety and security of the Pilots."

Views on the first inaugural issue of AIMPA Journal- first of its kind in Indian Shipping.



Shri. Amitabh Kumar
Director General of Shipping.

“Read through the inaugural issue of AIMPA journal. This is commendable work in taking shipping in India forward in right spirit. Hope lot of good and

informative articles will be shared in future. AIMPA has been the silent force to get things done. This is a step ahead to strengthen the community which is small but important one for port operations and impex trade.

I wish them all the best and look forward to future issues as I am eager to read them.”



Dr. Malini Shankar
VC, Indian Maritime University.
Ex DG Shipping, Ex Chairman
National Shipping Board

“AIMPA journal is an innovative approach of brainstorming the Pilot reforms that are needed in

Indian shipping. The journal would prove to be a good platform for knowledge sharing among pilots and institutes. I understand that it plans to cover a wide range of topics from Pilot Training to advancement of technology in pilotage services. I wish the AIMPA all the best in their future journey and wish all the pilots best safe operations in port.”



Shri. Sanjay Bhatia
Upa-Lokayukta
Ex-chairman of MBPT and
Indian Ports association.

“AIMPA journal is a welcome development as it will fulfil a much needed requirement of

sharing of technical knowledge among pilots of Indian Ports. As AIMPA is committed to safety and security of Marine Pilots it should send its suggestions/reforms to the authorities. I hope AIMPA will bring about the necessary discussions for improvement of Pilotage.

I wish the AIMPA all the best for future endeavours.”



Ms. H K Joshi
Chairperson- Shipping
Corporation of India

“I wish to convey my deep appreciation for the work being done by all the members of AIMPA during this pandemic.

Like all seafarers, as essential workers involved in port operations, marine pilots have also braved the risk and performed in these challenging circumstances. There is no substitute for the presence of a qualified pilot on bridge. This E-bulletin fulfils the momentous task of imparting technical information and improving the pilot's safety environment to minimize personal injury. My Best wishes to Team AIMPA !!”



Capt. Shailendra Kohli
Ex DC Mumbai port.

"I felt a surge of pride on reading the maiden issue of the AIMPA journal .

At last , we have a forum which not only celebrates the sterling

service rendered by the outstanding Indian Marine fraternity but also highlights the trials and tribulations of the mariners' professional lives . The challenges faced , the dangers battled and the extreme price paid often by laying down their lives in the line of duty find a worthy mention in the journal.

Suffice to say, the Indian pilots, acknowledged as the best of the best internationally, have now found a voice in this journal.

I am confident that the members of the mariners family will participate enthusiastically by sharing thoughts, feelings and experiences of their lives on as well as away from the high seas.

Congratulations to the excellent work done by the team of editors in bringing together this selfless, long due venture .

Best wishes and God Bless ."



Abdulgani Serang
General Secretary, NUSI

"Dear Capt. Karanjikar,

I would suggest that the journal also has contact details of AIMPA itself and not just that of the publisher.

Additionally, the contact details (emails, etc.) of those who are putting articles should also be mentioned so that a reader having any views can contact them personally. It creates synergies with the reader and the writer of the articles. I wanted to interact with Capt. Pasha and also Capt. Joshi on the points raised by them, but could not.. Additionally there has to be section devoted to lighter moments and something other than the hardware stuff of the journal. the hardware stuff is no doubt good, but lighter moments will help. It is like the song "khaikepaanbanaraswala" added after the film "DON" was made to break the seriousness and the heaviness of the plot and it was a hit...

rgds"



Captain Gurpreet S. Singhota
Deputy Director (Retired)
Maritime Safety Division, IMO.
Wyboston, UK due venture .

Dear Captain, Karanjikar,

Thank you for sharing a copy of the August 2020 Inaugural issue of the

All India Marine Pilots' Association (AIMPA) Journal.

This is indeed a timely and a pro-active initiative by the Indian Maritime Pilots fraternity to enable them to have a "collective voice" in matters that concern maritime safety and also a common platform to share their experiences.

There have been in recent times quite a few instances of Pilots losing their lives in the performance of their duties, whilst embarking/disembarking from ships. Most of these unfortunate incidents are due to a failure on the part of the ship to properly secure the pilot ladder and/or due to defective pilot ladders. This is something that is not acceptable at all and it should never happen.

India is a leading maritime nation with a tradition of quality and safety. Maritime Pilots are practitioners at the top of their profession, and it befits them to join together, both nationally and internationally, to adopt best practices and the latest techniques to enhance the service they provide at the most critical phase of the voyage.

Accordingly, having had the opportunity to deal directly with the subject matter at IMO for nearly three decades, I recommend the next progressive step forward would be for AIMPA to seek formal membership of the International Maritime Pilots Association (IMPA). This would enable AIMPA to have a say in all matters that concern pilotage safety in international fora like the IMO.

I wish you all success for the voyage ahead.

Best wishes and God Bless ."



Mr. Joris. J Stuij
Vice President Global
PTR Holland- leading pilot ladder
manufacturer.

"I would like to take this opportunity to congratulate you all with the recent launch of the all new AIMPA magazine, hopefully

with all this continuous new developments around the world it will all contribute to the safety.

Should we PTR HOLLAND® be required to contribute in anyway, feel free to contact me at any time."

Pilot Personality of the Month

Capt. S. G. Deshpande



Capt. S. G. Deshpande

Capt Subhash Deshpande is a versatile personality with many feathers in his cap. He is been the Pilot, Trainer, Nautical lecturer, consultant, Management representative, and academic advisor

Started his career in 1968, became Master to with Wallem ship management,, served as pilot for 11 years in Mumbai Port, then again he did a sailing stint and then became a nautical lecturer. He eventually became consultant and academic advisor in 2003. Has been external examiner for masters and Mates for the orals portion from 1989 to 2019 and is still continuing once every month.

He has received "Lifetime Dedication award to outstanding contribution to Maritime Training and education" from Global Met in November. 2017

Capt Deshpande has written several papers on versatile subjects and has been pioneer in starting various institutional courses. He is very actively involved in all sorts of nautical training and has been very practical trainer.

He has also involved in teaching students of all grades including those of Extra Master, Master, First Mate, second Mates and NWKO. He taught subjects Seamanship, Emergencies, Ship handling, Collision regulations, Oil - chemical and gas tanker technology, Naval Architecture and ship stability, Electronic navigational aids, Cargo work, Tanker technology, ISO 9000, ISM code, Casualty studies, Oceanography and Legal and Commercial knowledge. He has also developed and delivered 10 courses on "Advanced ISM Implementation" for IMTC (of BSM) to shipboard officers.

Training for Marine Pilots Yesterday – Today - Tomorrow

Capt. Gaurav Chhabra - Director, Technical Sales & Business Development



Capt. Gaurav Chhabra

Director, Technical Sales & Business Development

Capt. Gaurav Chhabra is a Master Mariner and has a sailing experience of 13 years. He had completed his presea and post sea competency training from ARI.

After his sailing experience he joined ARI in the leadership team and currently leads the Technical Sales and Business Development team. In the capacity of Director, Capt. Chhabra is accountable for technical sales and business development across the entire range of simulation products. He is responsible for key account management, client interface, and management and expansion of the company's value added reseller network and marketing partners worldwide.

With sound experience as a project manager for marine and offshore simulation projects for several years, Capt. Chhabra besides providing domain inputs is also at times involved in technical product validation for marine and offshore suite of products.

Introduction

Estuary navigation, maneuvering in confined waters, ports or canals demands great nautical skill. Merchant vessels with ever increasing dimensions have to be safely guided through narrow waterways, often in heavy traffic. The pilot acts as the partner of the captain coping with this demanding role, which requires vast experience as well as specific knowledge of the vessel and the estuary. Within a very short period of the time, pilots are required to acquaint themselves with the characteristics and maneuvering of an unfamiliar vessel, while taking weather conditions, currents and tides into account, before setting course and giving instructions to sail.

Many people watch ships moving in or out of ports with no idea that a local mariner (maritime pilot) is on the bridge of the ship assisting its navigation. A maritime pilot is a professionally licensed mariner who navigates all kinds of ships safely and expeditiously through domestic waterways while ensuring safety of the environment, people and trade. Pilots are highly trained experts in ship navigation in confined waters and possess highly specialized extensive knowledge of local conditions. Pilots provide pilotage service in accordance with port shipping requirements and the Port Authority Act. They coordinate all arrangements relating to vessel arrivals, anchoring, berthing, unberthing, shifting ships, departures and are responsible for completing required pilotage documentations for charging. A maritime pilot liaises with the pilot boat crew to coordinate towage requirements and advise the hydrographic office regarding notice matters, navigational charts, navigation warning and hydrographic reports.

EARLY MARINE PILOT TRAINING

Early pilot training was conducted through on-the-job training and concentrated on a pilot's ability to handle a ship, up to a specified limit of length, draft, tonnage or combination thereof. It entailed specific pilotage assignments consisting of a number of supervised maneuvers – berthing, unberthing, mooring at buoys, getting underway from both channel passage and maneuvers specific to that jurisdiction before being allowed to work alone.

PILOTAGE IN MODERN SHIPPING

Trade routes, navigational technology, ships size and specialization have changed greatly over time. The need of having a pilot on board vessels transiting high- risk waters remains critical. Today's pilots use the most sophisticated maritime technology in combination with their expert local knowledge. Technological advancement is moving at a fast rate, making it difficult for pilots to keep pace with such current high technology. New ship types demand new maneuvering skills, yet maritime pilots are required to maneuver them without prior experience, exposing them and others to potential dangers. These changes demand specialized skills, constant vigilance, and decision –making of the most complex sort. Pilots must be familiar with every aspect of the pilotage district for which they are licensed and therefore must be able to recount under all weather and visibility condition. Today's pilots provide one of the most important services available to the shipping industry and public. The fallout of any potential incident is so high that pilots are placed under pressure to consistently perform with no scope for error or inaccurate judgement. MASTER - PILOT RELATIONSHIP

Although captains are experts at navigating vessels, they are not experts on local regulations and specific environments of ports, hence they require the expertise of a maritime pilot to ensure that their vessel,

crew, passengers and cargo arrive at their next port of call in a safe and efficient manner. The master and pilot relationship is based on trust, honesty and assurance. A pilot expects the master to be honest in describing the condition of the ship and the problems it has, while the master depends upon the pilot to describe the transit honestly in terms of foreseen problems, route, tugs, line handlers and shore facilities and to be knowledgeable regarding the local regulations. The pilot must assure the master that he/she is competent and capable of handling the ship which he/she can do to through pilot voyage planning, relevant port information and conference with the deck officer. Pilots should seek the master's advice on any matters of concern with maneuvers.

TRAINING STANDARDS

Authorities should ensure that the established training and certification or licensing standards are sufficient to enable pilots carry out their pilotage duties safely and efficiently. The training standards required are set for initial training; continuing training and for updating and refresher training which all have distinct goals and learning outcomes.

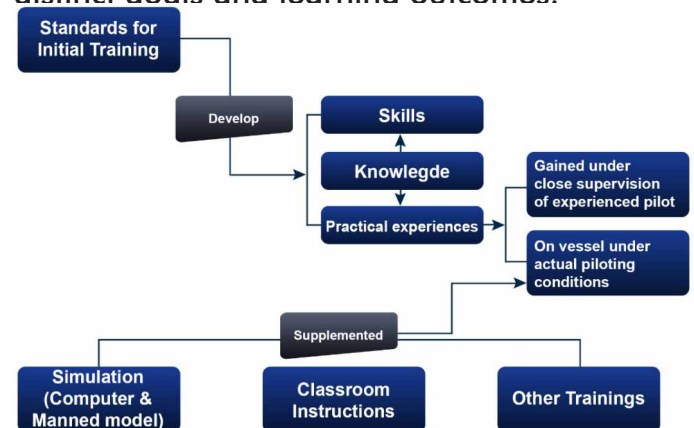


Image describing the Initial Training Framework

RATIONALE FOR USING SIMULATOR BASED TRAINING

Simulation refers to the representation of conditions approximating actual or operational conditions. Simulations can be formalized into scenarios that are used for

teaching and performance evaluation. A scenario is a specific simulation with a specific objective.

The theoretical rationale for the use of simulators for training is based on the concept of skill transfer—that is, the ability to adapt skills learned in one context to performance or task execution in another. Because no situation is ever identical to a previous experience, the fact that an individual becomes more skilled with each repetition of a similar task attests to the fact of transfer. Indeed, a faith in the "fact" of transfer constitutes the basic justification for all formal training programs. It is assumed that skills and knowledge learned in a classroom can be applied effectively to relevant situations outside the classroom.

No training environment will be exactly the same as the operating situation. To ensure that all training goals are met, it may be appropriate to supplement the learning with apprenticeships or a similar formal mechanism to reinforce learning.



Computer Generated Image of a Mini Bridge Simulator



Computer Generated Image of a Desktop Based Simulator



Computer Generated Image of a Full Mission Simulator

MOTIVATION FOR SIMULATOR-BASED TRAINING

Simulator-based training permits hands-on training to be conducted in a realistic marine environment without interfering with the vessel's operation or exposing it to risk. Training can continue independently of adverse weather conditions, vessel operating schedules, and other training conditions (e.g., harbours and waterways). The following sections discuss simulation characteristics as a teaching tool.

Safety - Risks associated with training on operational equipment are a concern in any industry. Within the commercial air carrier industry, the widespread use of simulators in training has reduced training accidents.

Simulators allow students to repeat a risky operation several times if needed. Unlike training on operational equipment, where an instructor must be prepared to intervene at all times, risky maneuvers can be safely practiced on a simulator. Simulation enables the placement of full responsibility on the prospective officer-of-the-watch before that individual actually assumes the duties of a licensed deck officer.

This teaching situation is different from that aboard a school ship, where a licensed deck officer is ultimately responsible for the vessel's safety and must necessarily intercede and tutor as appropriate to the situation.

In on-the-job training, concerns for safety of the vessel might cause an instructor to intervene earlier than is desirable for efficient progress of learning. During real operations, it may be necessary to interrupt training to avoid a real-life accident. In simulator-based training, the instructor can allow students to make mistakes, to see the consequences, and possibly to practice recovery procedures. Although there is limited objective evidence on the value of permitting students to make and recover from errors, many instructors believe students can receive full benefit from the training event only if given the freedom to make mistakes.

Lesson Repetition - Using simulation, the instructor can terminate a training scenario as soon as its point has been made or repeat it until the lesson has been well learned. In contrast, opportunities for repetition are very limited during actual at-sea operations; the opportunity to repeat an exercise in on-the-job training aboard ship may not occur for weeks or months.

Recording and Playback - Another feature of simulator-based training is the ability to record and play back the just-completed

scenario for review, evaluation, and debriefing purposes. As a teaching tool, recording and playback empowers the instructor to let mistakes and accidents happen for instructional emphasis and allow trainees to review their actions including the correct and incorrect decisions that were made by the trainee for later debrief and assessment. As an assessment tool, recording and playback can provide a history of performance that serve as a "second opinion" if a candidate challenges an assessor's opinion, thereby minimizing what might be an otherwise subjective licensing assessment.

Flexibility - Simulator-based training permits systematic scheduling of instructional conditions as desired by the instructional staff or as directed in the training syllabus. Simulation permits the use of innovative instructional strategies that may speed up learning, enhance retention, or build resistance to the normally disruptive effects of stress.

Multiple Tasks and Prioritization - Deck officers at all levels of responsibility must continually decide at any given time, in any given situation, which, among a number of tasks are most important. Before simulator-based training, a new officer's initial training often consisted of a range of skills that were taught, practiced, and examined separately. Use of simulation in training programs makes it possible to transfer classroom skills and to practice and prioritize multiple tasks simultaneously. Simulation training enhances development of skills and provides the opportunity to exercise judgment in prioritizing tasks.

Training on New Technologies - By employing features such as the ability to repeat training exercises and to record and play back performance, simulators can provide a safe environment for training mariners in the use of new equipment. Simulators in today's time have become artificially intelligent to prompt trainees of corrective action required in real time during an exercise and enables the trainee to learn correct techniques and practices for ship handling and maneuvering.

Peer Interactions. Simulator-based training at simulator facilities can provide a forum for peer interactions and evaluations that might not otherwise occur. Because of the often-solitary nature of their work, masters and pilots can routinely serve for years without having their work observed or critiqued by their peers. Simulator-based training can provide an opportunity for these mariners to improve their competency and learn new techniques by having old habits challenged and corrected in a safe environment.

The value of simulator-based training stems from the ability to provide an education environment that replicates real-world situations with the knowledge that these simulations can elicit similar psycho-physiological responses as various real-world scenarios. Moreover, incorporating simulators into the training environment enables trainees to experience a range of real-world situations (e.g., severe weather, variable ship size) that may otherwise take a considerable period of time to acquire in the real world. Therefore, simulation can be used not only to facilitate expertise through repeated exposure and practice, but also as a means to investigate the fundamental processes that individuals may draw upon under arduous conditions. By repeatedly performing simulated tasks, learners can thereby acquire new skills and develop greater confidence in their ability to execute these skills.

The Simulation Software typically provides for high fidelity hydrodynamic ship models that provide the operators with the ability to conduct complex maneuvers with propulsion, steering and interaction with the environment. The Port areas and environment include high detailed modelling with overlay of CAD data, Bathymetry, Tidal, Wind and Current field data. This provides a compelling tool for the purposes of feasibility studies with the necessary iterations to arrive at the optimum solution.



Maritime Pilot Training Simulator in Action

Image Courtesy:

<http://maritimepilots.com.mt/>

SIMULATION STUDIES

- Simulation studies for vessel navigation and maneuvering are an integral part of any Port development project – be it a Greenfield or Brownfield port, harbour, berth, river, terminal or inland waterway.
- The Advanced Pilotage Simulator is designed to help in studying the feasibility of safe navigational operation of the intended vessel type(s) in the proposed maneuvering area before large resources are committed to the development of waterways and port infrastructure.
- An Advanced Pilotage simulator has the capability to take into account advanced pilotage effects such as: Bank effects, Squat, Ship-to-ship interaction; Shallow water effects on vessel maneuvering; partial current exposure due to shadowing effect of structures like breakwaters and other similar advanced features that provide a very high degree of realism to the simulation study. The simulator platform provides the ability to integrate current and bathymetric data base for the navigable area over a full tidal cycle.

CUSTOM SIMULATION SCENARIOS

- The process of preparing for the simulation study of port specific Pilot Training programs invariably involves custom creating a number of models, compatible with the proprietary simulation platform, that together permit an accurate, reliable and repeatable simulation study to be carried out.
- Visual port model – a 3D visual model of the area in which the modeled entities will operate and interact with other objects in the virtual world. High resolution textured visual scenes of harbours, aids to navigation, land and shore, vegetation, cultural objects, conspicuous objects, lights, and others are simulated to a very high degree of realism. The visual scenarios can be set for day, night, dusk, dawn or other conditions of ambient lighting and include limited visibility conditions.
- Vessel model – the primary entity, the behavior of which in the proposed environment is to be studied.

Electronic chart creation, including custom bathymetric data, channel layout and other geo-referenced data points - if it is a case of new port / terminal development where this data is not currently available.

EMERGENCY SCENARIOS

The Simulator permits creation of a large number of emergency scenarios related to, for example, engine breakdown, power failure, full or partial loss of steering system, sudden increase on wind speed, tug engine failure, failure of navigation systems and other similar scenarios where Pilots' skills are put to maximum use, or where abnormal situations can be identified and appropriate control procedures implements.

ANALYSIS AND REPORTING

After completion of the simulation study or training program, a comprehensive report on the study carried out, with meaningful data and insightful conclusions in line with the objectives of the study can be provided.

Simulation runs matrix with conditions of each run

- Description of the ship models used for study including validation data and pilot cards
- Description of the environmental parameters used for the study and the reasons for selecting the threshold values
- Results of each run including graphical presentation of vessel track and data plots
- Data for Tug usage including power used and direction of push / pull, duty time stamped for synchronization with vessel location / movement
- Data relevant to vessel movement presented as tables or graphs for easy correlation.

Assessment of the difficulty of the maneuvers based on the personal appraisal of the pilots / mariners responsible

SUMMARY & RECOMMENDATIONS

There is no doubt that the mainstay of marine pilot training will continue to be simulation-based training. To meet the compelling demands of the profession and to ensure a growth trajectory that fulfils the requirements in terms of competencies, it is necessary to develop a sound pilot training framework, which is based on scientific and modern methods and which addresses the skilling GAPS of maritime pilots.

It is to be noted that there are areas discussed in this report that needs the attention of all stakeholders. It is imperative that efforts are made to improve areas such as maritime pilot licensing mechanism, providing latest training tools to increase competencies and avoiding accidents that cause unnecessary loss of life and property, identify potential training partners and reducing the skill GAPS, establishments of Centers of Excellence to drastically ramp up skilling. To prevent accidents at sea, it is important that licensing mechanisms are streamlined. Periodic Assessment of the requisite skills such as seamanship, handling of bridge equipment, Emergency and Disaster Response should be

compulsorily carried out. Faceless, Automated & Simulation based assessment techniques currently being pioneered can be of immense help in this area. Centers of Excellence equipped with the latest and most advanced equipment including simulators, Artificial Intelligence/ Virtual Reality Trainers should be considered as they are very engaging and are

language agnostic. Apart from training it is imperative that the psychological aspects are taken into consideration, erratic work schedules, extreme demands of the job take their toll on a maritime pilot mental as well as physical health. Establishing a regular routine of physical as well psychological assessment can go a long way in ensuring safety and job and more importantly a healthy pilot.



Maritime Pilot Training Simulator Setup

Image Source:

<http://maritimepilots.com.mt/>

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My Accident-

A pilot's firsthand account

Captain Malcolm Goodfellow, Check Pilot Newcastle

*Captain
Malcolm
Goodfellow*



Malcolm has been 46.5 years in the maritime industry. Currently a Check pilot at Newcastle (last 6 years) and have been a Newcastle pilot for the last 17.5 years. He has served on the board of the Newcastle Port Corporation for 3 years prior to all NSW ports coming under the Port Authority of NSW. Prior to piloting He was the Surveyor in Charge of Newcastle and an Examiner of Masters and Mates for the Australian Maritime Safety Authority. His role in AMSA included assisting in the development, implementation and delivery of surveyor training both in Australia and overseas, conducting specialised surveying on behalf of the UK MCA on passenger vessels and accident investigation. He joint sea in 1974 with Blue Star Line (London) and later sailed with Burns Philp and on medical aid vessels serving in all ranks including Master. He is a licenced compass adjuster for over 30 years and conduct part time lecturing on magnetic compasses and magnetism to the Masters course at Newcastle as well as for the Royal Australian and Royal New Zealand Navy at the Australian Maritime College. Qualifications include Cert IV training and assessment, Graduate from the Australian Institute of Company Directors and a member of the Nautical Institute, the Australian Compass Adjusters Association and the Australasian Marine Pilots Institute. He suffered a very severe workplace accident earlier last year and am still recovering although back piloting.

His hobbies include spending quality time with my family and playing bagpipes and is passionate for the education and training of pilots and mariners.

This is Capt. Malcolm's story which he wishes to share with his fellow mariners.

The Incident

In the early hours of the 27th January last year (2019) I was the allocated pilot for an arriving ballasted Capesize bulk carrier (M.V Spring Pride) at Newcastle, NSW, Australia. Normally this vessel would be a helicopter transfer for the pilot, but due to the prevailing weather conditions that night, the helicopter could not fly, and all pilot transfers were converted to pilot cutter.

The weather conditions were not good, a 2.5m swell from the east, a 2.5m sea from the south and southerly winds of 25kts. Important to note is that the swell period was very short at around 7 seconds. It was a damp and humid night and as the vessel had been instructed to rig a port side regulation compliant pilot ladder some hours earlier, the ladder was certainly wet with the ladder rigged some 2m above the waterline and exposed to the weather.

The boarding position was over 5' off the port and due to the various swell and sea conditions it took some time to achieve the best possible lee with the vessel for boarding. Eventually the vessel was placed onto a heading of approximately 060°.

Our pilot vessel is a state-of-the-art vessel and is manned with a very experienced crew (a master and deck hand on this occasion). Our pilot boarding procedures in Newcastle are very detailed and all crew members including the pilot must agree on the transfer prior to it taking place, i.e. lee acceptable, boat movement within acceptable limits, ladder rigged correctly etc.

When it was time to exit the cutter cabin and proceed forward to the deck to board the ladder, I was tethered to a travelling rail as usual. On reaching the forward part of the cutter deck, the cutter alongside the ship, it was noticed that due to the confused sea and swell conditions and the very short swell period, the cutter was riding very quickly up and down the ships side, well over 2-3 metres in range. The sudden movement of the cutter was a concern, but not unusual off our very exposed port. After assessing the cutter movement, a number of times, I decided to attempt to get on the pilot ladder, of course waiting for the cutter to be on a crest and momentarily stable. I had boarded ladders in similar conditions many times in my career.

With both hands on the side ropes of the ladder and one foot being placed on one of the rubber lower rungs, the cutter suddenly dropped away into the trough and all of my weight came onto my hands and I just fell away from the ladder. It is a very terrifying experience to be free falling from ladder in the dark, knowing that in a very short time you will either end up landing on the pilot cutter (and probably suffer extensive injuries), landing between the cutter and the ship (crushed or lose legs) or landing in the water (drown). After falling over 2 metres (not too sure how far it was) I landed on the pilot cutter.

My first thought was at least I'm not crushed between the boat and ship. Immediately I felt extreme pain in my back and left arm and could not move. I remember thinking, I'm alive, but realized I was in a serious medical condition. I thought I had spinal injuries and feeling my body with my right hand, I could not actually find my left arm. I thought I had lost my left arm. The first tendency is to wiggle fingers and toes and my left-hand fingers were actually scratching my right lower thigh and I felt like there was something right across my back, it was my left arm severely broken and twisted across my back.

The cutter master and crew member did a miraculous and professional job in taking care

of me. The cutter master decided to return to port at a very reduced speed (8-10kts) not wanting to bounce me around with the injuries I had sustained (our cutter can do 25 kts). I was laying on my back on the foredeck and re-tethered to the boat. The crew member supported by back and head for the 45-minute trip back to the port. It must have been a major traumatic experience for the cutter crew, not being fully aware of the extent of my injuries. The crew will always be heroes to me for their actions that night. There are no pain relief medications on our pilot cutters (not required for survey requirements) so unfortunately you just have to suffer whatever pain you have. Paramedic crews were waiting once we got back into port, and it took another 30 minutes of stabilization with morphine etc before I could be placed in an ambulance and taken to hospital.

I spent 6 days in hospital and had significant injuries including a badly broken humerus, broken ribs, bleeding kidney and strained pelvis. I was told by doctors that the extreme nature of injuries and time to receive medical treatment could have easily resulted in a worse outcome, and if I had been raced back to port quickly on the cutter could have resulted in my death. It should be noted that I never lost consciousness at any time and when I fell, just missed hitting my head on the cutter hand railings. I was not wearing a helmet at the time. Had my head hit the rails, or hit the deck heavily, it could have easily killed me.

My accident was one of the most severe to occur to an Australian pilot on a pilot ladder in many years. To say it has heightened awareness to other pilots in the country would of course be an understatement.

Accident Investigation and review

A very extensive post-accident review and investigation commenced almost immediately by my employer, the Port Authority of NSW. This review is still ongoing and has been driven and lead by senior management, post trauma accident investigation experts and includes numerous management levels, pilots and all of those involved in the incident.

The incident investigation is in the form of an ICAM (incident, cause, analysis, method) Reeson type analysis. Some of the issues being identified in the investigation and being reviewed and assessed include:

- Pilot helmet testing and analysis of types available to marine pilots. The PANSW has undertaken very extensive live water testing of helmet makes and types with rescue services jumping from a height of 7 metres into a pool with normal pilot lifejacket on. This has been documented and video recorded. Helmets will become compulsory PPE.
- Reassessing our existing pilot cutter work instructions with comparisons to other pilot service providers in the country to try and incorporate 'best practice'.
- Investigate the feasibility of any fall restraint system being used by pilots anywhere in the world.
- Assessing modifications to the pilot cutter to ensure an obstacle free area is available at the transfer point should a pilot fall onto the cutter.
- Assessment of the best slip resistant foot ware and non-slip gloves are available for pilots.
- Assessment of soft-landing material that can be applied to the cutter deck (similar to that found in playgrounds)
- Enhanced trauma first aid training for all cutter crews and pilots
- Enhanced medical equipment to be on the pilot cutter (above survey requirements), including such things like defibrillators, stokes litters or spinal boards, special pain relief medications, other specialized equipment to deal with severe trauma incidents.
- Liaising and training for emergency agency supervisors in understanding the specific difficulties of evacuation of an injured person on a pilot cutter.
- Marine incident management check lists to cover immediate notifications after an

incident, management review timelines, form of investigation teams etc.

- Assessing the possibility of identifying various weather criteria, e.g. wave height, period, wind speed etc, that will result in 'go, no-go' decisions for pilot transfer.
- Implementing a traffic light 'green light, amber light, red light' decision system so that anyone on the cutter can call a transfer off if not satisfied with the safety of the transfer (red light). A 'green light is required by all persons before a transfer can take place.
- Functional assessments (strength and fitness) by medical professionals of using pilot ladders including the physiology of climbing ladders.
- Assisting myself and family in dealing with the post-accident trauma.

Unfortunately, in our industry, action is often reactive rather than proactive, however the results and analysis of my accident will no doubt have positive and beneficial lessons and outcomes for all, that hopefully other pilot services can review and adopt if they consider will make their own operations safer for pilots.

Post Incident trauma

I have been a pilot for nearly 17 years and in that time have never had a significant accident on a pilot ladder. My recovery, I am told, could take close to a year and involves extensive physiotherapy and medical assessments to ensure that my health and fitness return to pre accident levels. Every day I am reminded of my accident, by the limitations of what I can currently do and the pain I have and recalling the events that night. This will subside over time I know. I have a great passion for the profession of piloting, as most pilots do, and sometimes wonder if I will ever be fit enough, or mentally able to climb a ladder again.

Many thoughts go through your head after an accident, I could have been easily killed, or permanently maimed for life. The doctors I have spoken to cannot believe I did not suffer serious spinal injuries or internal organ damage. One thinks about family; how

important they are to us all. The impact on them has been significant.

The experts say that psychologically, severe accidents have a significant effect on ones thought patterns and how one thinks about life. I am fortunate that my employer provides industry leading post traumatic accident psychologists should I need to speak to someone about anything that is concerning me. This is a very important resource that should be available to anyone who suffers a major workplace injury. My employer has been a major support to me throughout the whole ordeal.

Lessons for Masters, Pilots and pilot authorities

Although not an apparent factor in this case, the importance of a correctly rigged pilot ladder arrangement in good clean condition is paramount to pilot safety.

Always be mindful of the prevailing weather conditions and the necessity to make the very best lee available in consultation with the pilot. Masters be aware that pilot transfer is regarded as one of the most hazardous things that can occur, be alert to an accident

happening, have crew always ready and available should something happen and you may need to assist in a pilot's recovery should he/ she fall or be injured.

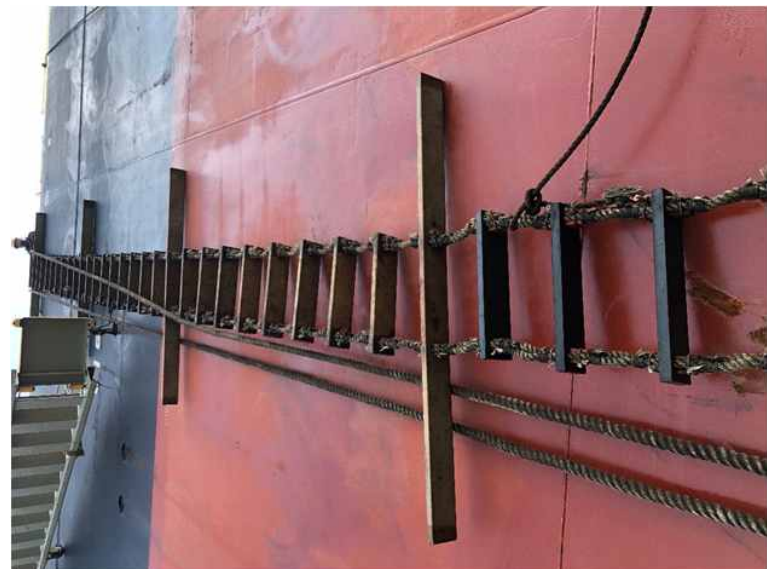
One thing that I have noticed over recent years is the absence of the master observing the transfer from the bridge wing. This was standard practice years ago but seems to be rare nowadays.

For pilots, never take any transfer for granted. Things can go wrong in a fraction of a second with enormous consequences. If it is considered not safe to transfer, DON'T do it. Always utilize the best available PPE, i.e. helmet, lifejackets, non-slip shoes and gloves.

For pilot authorities, ensure your crews are trained to best practice with the best first aid and trauma management skills. Ensure your work instructions or procedures for cutter transfer are best practice. Ensure any post-accident review is conducted thoroughly and implement findings and learnings as a priority. Ensure your pilot cutters are equipped with additional medical equipment that may be invaluable should someone be hurt. Make the work environment as safe as possible.



Our Pilot cutter



This was the ladder rigged on the ship later in the day after my accident to show the condition of the ladder and the climb. The manropes and retrieving line were not like this at the time of the incident

Real Life Incident: Pilot/Person transfer: Lessons to be learnt

Capt. Manoj Joshi, Dy. Conservator, Marmugoa Port Trust

“An old and experienced pilot loses his ship through too much self-confidence.”

“A young pilot loses it due his ignorance and want of experience.”

Shortened quote from Daniel Defoe,

Below is the real life Incident by one of the pilots of the AIMP, as reported. The incident marks certain flaws in design, practices and procedures, Same is being reproduced here, with changed identity for learning.

What happened?

Two pilots were getting ready to embark on a TUG to get transferred to a vessel for pilotage duty. When Pilots reached the wall, the TUG was getting her engines ready to leave. It was drizzling a bit, so when pilots got off their vehicles, soon their baggage were sent to the tug, and then, first, Pilot climbed onto the tug by grabbing the side rails. The crew stretched out their hands to received him

And then the other approached to grab the rails. But just then he noticed that the tug was receding away from me. Luckily due to alertness, he was quick enough to notice it and stopped myself from stepping out further. The tug moved too far away quickly. But as he shouted and waived trying to inform them that he been left behind, they saw me on the wall and returned to receive him.

Findings

Later, after boarding the tug he reached to wheel house, tug master was asked about this, who said that he could see the point of boarding and since the pilot had come to wheelhouse, he assumed that the man-transfer was over and therefore had pulled the tug away from wall, ready for leaving. The Handler a slohad no knowledge that two persons to be received during the man-transfer operation. Pilot checked for himself and found that from handlers seat of operation, he cannot see the pilot boarding position. It was a blind sector.

Result:

Pilot was lucky to have not fallen in water due to his alertness.

What needs to be done:

1. The pilot/person boarding position has to be in sight of handler.
2. Tug should now number of persons boarding.
3. Deck crew spotting two people should relay information to wheelhouse.
4. When two or more pilot/persons are boarding- first boarder must wait till the next fellow safely boards.
5. Personal transfer must be overseen by a responsible person who is in direct contact with handler.

Lessons learnt

- Personal transfers are to be taken very seriously.
- Someone must watch over and instruct Handler/Tug Master about the ongoing transfers.
- Handler must have a direct overview of the boarding point.
- Accompanying person must have wait for safe boarding of other person.
- During inclement weather condition, the transfer operations must be planned with proper PPE.
- Understand the blind sectors of operations where handler has not direct sight of the operation.
- Engine movement to be directed by person who has a direct sight of operation.

Pilot ladders – bits and pieces and a bit of testing.

Capt. Troy

Capt Troy is currently employed as a Pilot in NZ. He has immense interest in Pilot ladder testings, tug designs etc.. Work related interests include breaking stuff (testing pilot ladders), tug design and analysis of PPU data. Keeping safety of pilots in mind, he likes to attempt to identify changes that may affect the safety of pilotage, vessel, environment, or related to individual pilots. Troy denied approval of printing his photo as he wants his work to be valued more, shows the fineness of his nature and concern for his own work.

Strength

I hear people talk about strength of pilot ladders, they refer to the rules which state 24kN for the side rope material, the rules do not state a strength for pilot ladders it is the strength of the material for the side ropes.

You may think this means little, but.... A pilot ladder is proof tested to 8.8kN, that means that the load you should safely put on a pilot ladder in use will be less than 8.8kN.

But the strength of the side ropes is 24kN x 2 or is that 4? MNZ Part 53 says in a footnote "6 The minimum strength of the pilot ladder securing arrangement must take into account that side ropes are doubled." To me that means 4x. In international rules it is pretty clear that the material of the sideropes is 24kN, MNZ Part 53 does not say how many kN.

SWL

Looking at safety factors, proof testing to determine a SWL for a pilot ladder with manila sideropes:

Manila rope SF of 12,

$$48\text{kN} = 4\text{kN},$$

$$96\text{kN} = 8\text{kN}$$

What proof load is required, looking back I found pilot hoists had to have a overload test of 2.2, below is some of the text from the old MNZ Part 53.

The test load applied to Pilot ladders currently is 8.8kN.

$$8.8/2.2 = 4\text{kN hmmm.}$$

Perhaps this is the SWL of a pilot ladder.

Ok what weight does a pilot ladder have to carry? A pilot, itself....

A pilot 150kg to allow for wallet(with pilots licence in), radio, small bag (sorry Hugh), wet weather gear (may be fitted with pockets to carry PPU), PPE (Incl Covid-19 gear).

A 15m long pilot ladder weighs in at 100kg.

Is 4kN or 407kg adequate?

$$250/407 = 61\% \text{ of the SWL}$$

But the side rope strength is 24kN x 4...

Tests have shown a doubled side rope to fail at ~44kN (single part failed at 24.5kN).

Just doubling the rope does not give you double the strength, think bending.

Would having a SWL make a difference? I do not know, but perhaps it might mean that after a pilot boat snags a ladder it would have to be thoroughly inspected and tested?

Intermediate securing of a pilot ladder.

53.20 Testing of pilot hoist

(1) A pilot hoist that is installed on a New Zealand ship on or after the date that Part 53 comes into force must be subjected to an overload test of 2.2 times the working load.

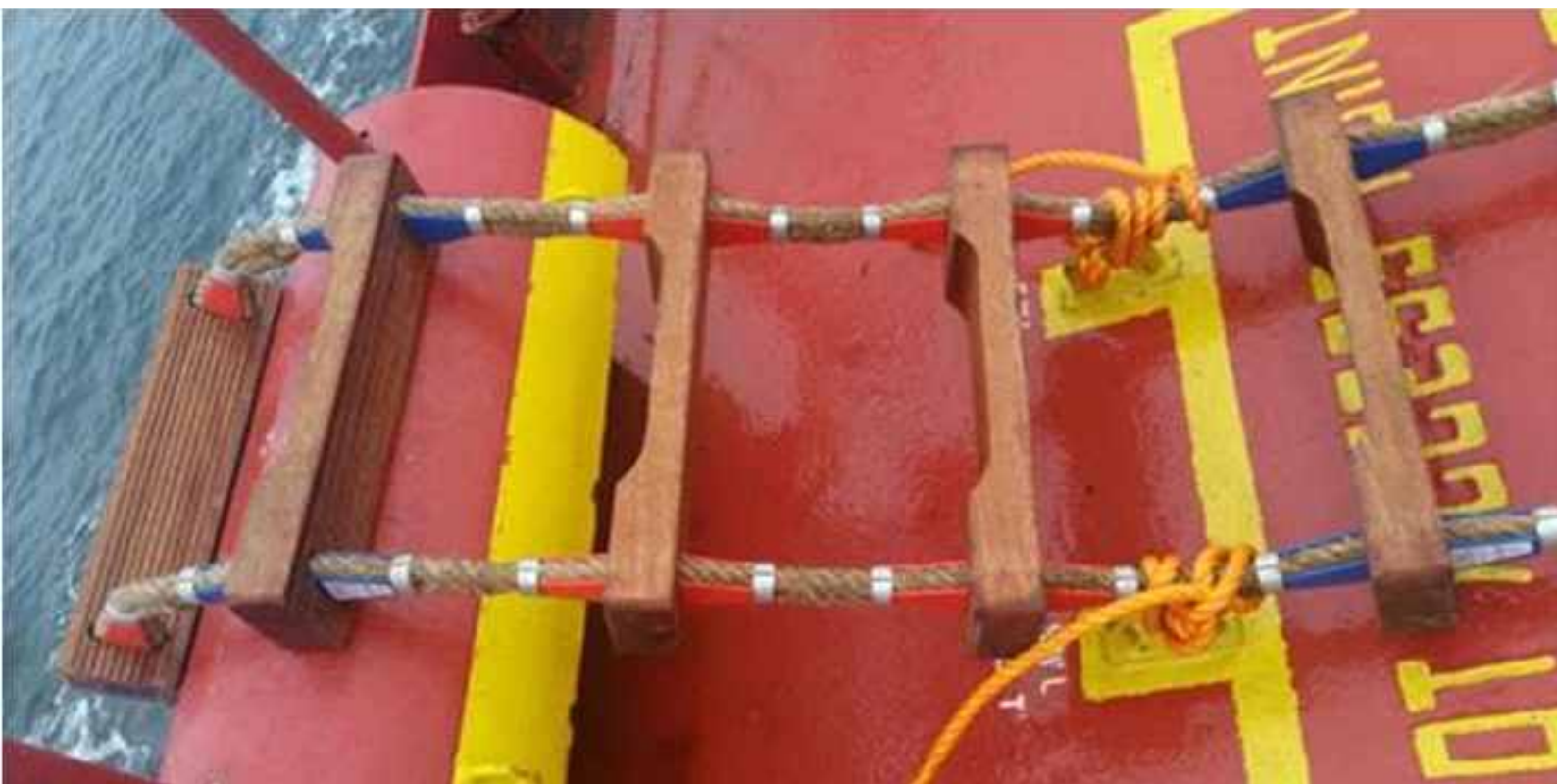
Are ok with any of the following?



1. Blue Poly



2. Manila, one part



3. Orange synthetic rope



4. Shackles 1



5. Deck tongue

Comments about the images

1. Rope diameter less than 20, synthetic, estimated strength ~4500kg 44.1kN per side
2. If manila ~24kN per side
3. Looks like 10mm, maybe 12mm polyprop, but it appears that there are two or more turns – strength 12mm three turns ~6000kg (58kN), if 10mm ~4200kg (41.1kN)
4. Looks like a pin part way out, for certified shackles if pin in WLL for 16mm ~3000kg, 13mm 2000kg estimated strength of a 13mm tested shackle ~10000kg, 11,

1500 – strength of three non-tested 11 mm shackle (till I got them) around 6000kg.

5. Testing found damage / distortion occurring at less than 1000kg on older ladders

What I've discovered with testing:

Both shackles and lashings damage the side ropes, look in the images above all of them show distortion to the side ropes, and all the lashings are on the step fixtures, as is the shackle, the question is which does more...?

Early testing has found rolling hitch versus shackle to have about the same strength of holding before the pilot ladder side ropes failed – further testing needs to be carried out.

Pilot ladder actual strength after a bit of use (abuse) is a lot less than the “strength of the side ropes”.

I will continue with testing, a total of over 100 tests have been carried out, I expect to carry out another 100-200 test before a more formal report is published.

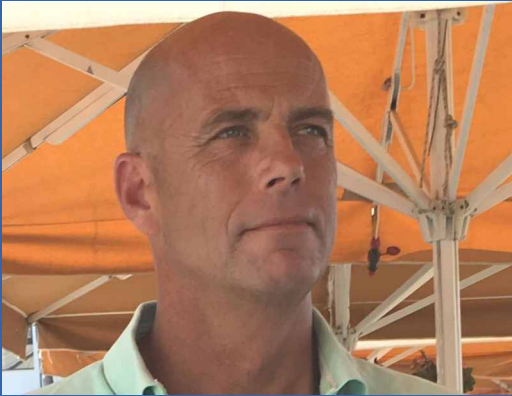
So shackles or rope lashings – testing is showing different shackles behave differently as do different size lashings so it is not as simple as it appears especially when you consider that one shipping company does not know one knot from another – it has sent a document out showing a photo with lashings – the knots are clove hitches.

I will refrain from stating my preference here.

Just remember a pilot ladder is only tested to 8.8kN (897kg) and has no SWL.

1000 WAYS TO SECURE A PILOT LADDER and only one way is correct...

By: Arie Palmers



Arie Palmers, Registered pilot

This article has been painstakingly compiled by Arie Palmers who is a registered Pilot in the Netherlands and known as a Pilot ladder safety crusader. He has made this as a safety campaign.

AIMPA joins hands with him in his efforts to spread the pilot ladder safety awareness to save life.

A spreader is a great invention to prevent a pilot ladder from twisting. Without a spreader you might look at the horizon instead of the ship's side all of a sudden. How to get back in a good position when something like that happens? Therefore, every ladder with more than 5 steps must have a spreader (IMO A.1045(27) rule 2.1.4).

That is what a spreader is made for and not for keeping a ladder secured to strongpoints on deck.

As we know from an earlier statement in the article, steps can handle 880 kilograms and sideropes 2400 kilograms each. That's the main reason you can and will not secure it this way. One touch of the pilot boat and the ladder will be damaged beyond repair, as will be the poor soul standing on the ladder...

Spreader



spreader used for secured the ladder behind a very thin piece of railing



Again a spreader as a securing method

Human force

I feel very lucky I've never ran into this method, but at least 2 of my colleagues have. Let's just assume you have to board a vessel, the ladder has to be lowered a bit, which goes rather rapidly and before you know it you look up, see a smiling face and thumbs up "ready Mr. Pilot!!"

Then you start climbing, what might be a real Jacob's ladder, you reach the top and 2 quite overweight guys stand on the sideropes on deck... horrible.

They must have read the instructions wrong. The instructions clearly state: the ladder has to be secured to strongpoints on deck and not to strong men on deck. After this case the vessel was reported, captain was angry, not with the guys on deck but with the pilot for reporting his vessel..



Combinations

Solas 23 clearly states (3.3.1): a pilot ladder requiring a climb of not less than 1,5 m and not more than 9 m above the surface of the water etc.etc.

Why 1,5 m? Well wait and see where you want to grab with a pilot ladder on a low freeboard of the vessel you have to climb onto... 3 steps over the side and nothing to hold on to.

Why 9 m? To make something clear: this has nothing to do with the length of the ladder, but only with the distance from the watersurface to the deck entry point >> more than 9m? Combination..

If you drop down from distances over 9 m there is a signi



non compliant combination

even death when you fall down. It's all about the acceleration..(FUBAR)

We have seen that I wrote in the above picture the set up was non compliant, but why? Looks alright or not?

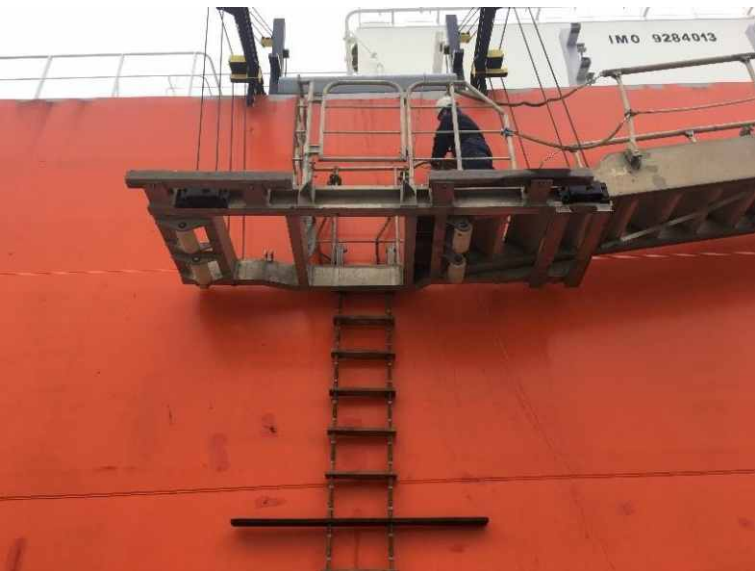
To start with, the ladder is tied to the gangway. Both ladder and gangway have to be secured to the hull independently, and not together... You see the ladder is not attached to the hull this way.

Ok. Suppose they have sorted this issue and you start climbing. You reach the platform and there's nothing to hold on to. On both sides of the platform there have to be hand hold stanchions (and horizontal ropes) so you can safely transfer from the ladder to the platform.

IMO A.1045(27)

- 3.2 angle of the gangway under 45 degrees.
- 3.3 lower platform horizontal and secured to the ship's side. At least 5 m above the water.
- 3.5 stanchions and rigid handrails.
- 3.6 ladder adjacent to the platform, maximum distance 0,2m, secured to the ships side.

Embarkation platform (a.k.a. "trapdoor-system")



Another name often used for this platform is "trapdoor system". Another wonderful invention to rig a ladder, at least a number of people must have thought it would be a great system. The problem is however, the more risk on non compliances, the more there will be.. (Keep It Stupid Simple).

Ok, let's go to the "rulebook" to see what's wrong with this setup...

IMO A.1045(27) 3.7 is the most important one in this case. It tells us the ladder has to "extend above the lower platform to the height of the handrail and remain in alignment with and against the ship's side..

We have already seen that the ladder has to be secured to strongpoints on deck, not the case here Also we saw that the ladder and platform have to be secured to the ship's hull, not the case here.

More often than not the platform has to be adjusted in height to make a safe approach of the pilot boat possible. This always happens in a jiffy which means, the winch is not mechanically secured and the system is not secured to the ships hull..all that is keeping you alive are the steel wires.

The ladder is attached under the platform, and we know now this is not correct. Whenever you reach the top of the ladder,

you have to lean back, grab some pieces of steel and drag yourself through the gap (750x750mm) in the platform.. during rain this system works as a nice shower as well: water collected on the platform and gangway will

Here are a lot of reasons why someone climbing this setup can fall back down into the water or onto the pilot boat. And yes it happens every year, again, with severe injuries or worse. It's inconvenient, slippery

Pilot ladder winch reel



Non compliant by design pilot ladder winch

First the "IMO-rulebook" again...

- 7.1.1 Position of the winch must provide unobstructed access to the ship. Here we see it's not the case: if you keep climbing you'll end up on top of the winch..
- 7.1.2 Point of access may be a ship's side opening, accomodation ladder or a single section of pilot ladder. In this set up you have to step sideways to

and dangerous, reject and abort.

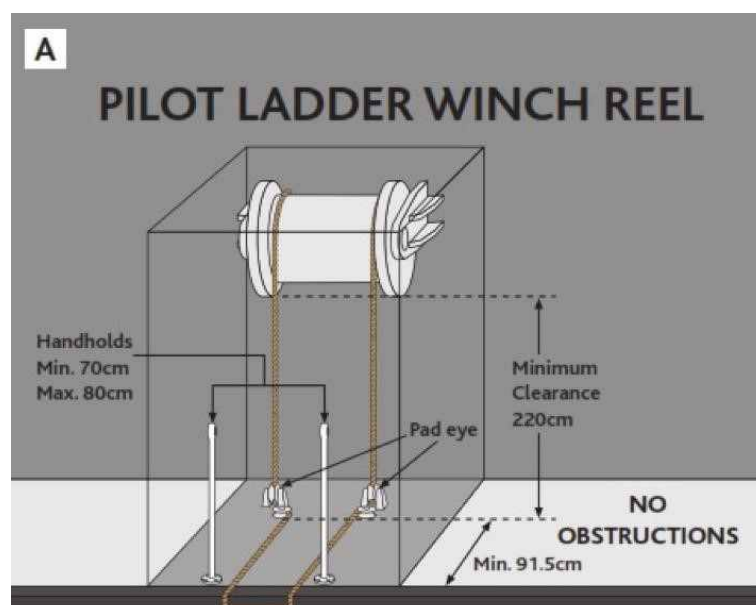
So the ladder has to run through the platform, must be secured to the already mentioned strongpoints, and had to rest the ship's hull as well, all not the case here.

I would love to show a compliant embarkation platform system, but in over 10 years of pilotage I have come across the most sickening phantasies in construction but never ever a compliant one, sorry dear reader..

the deck and in another section of this article we have already seen this is not allowed. What if, due to the freeboard a spreader is obstructing your unobstructed access??

- 7.1.3 The access position and area should be clear of obstructions. Therefore the winch has to be placed basically out of your way.

And the most important rule I want to stress on in this part is rule 7.4.2: the pilot ladder should be secured to a strongpoint independant of the pilot ladder winch reel AND 7.4.3: the ladder should be secured at deck level inside the ship's opening or, when located on the ship's upper deck, at a distance of not less then 915mm horizontally from the ship's side inwards.



section of the pilot ladder poster

Here we see a part of the well known pilot ladder poster, it makes the rule clear. Suppose the ladder is secured to the deck at the opening? This is a risk for someone climbing: when he reaches in, he can grab hold of a part of the ladder on the other side of the securing and fall down.. it has happened to one of my colleagues overhere, he wasn't able to work for over 6 months and gained a few kilos in weight only due to the nuts and bolts keeping his foot together. You'll understand the 915 mm makes sense. Haven't met anyone yet with arms longer than 915mm.

Also the system is secured in more ways: the ladder is secured to strongpoints, the winch is on the brake and (7.5.6) a mechanical device or locking pin should also be utilized to lock powered winch reels.

Again we see: the more dif non compliances.



*Non compliant:
not secured on deck and deck level*

Shackles (why & why not)



Non compliant (by design) pilot ladder winch reel, spreader obstructing entrance after the sideways dive.

In this clearly see the spreader is obstructing your safe access to the ship, and again you have to stumble side ways.

Conclusion in this section: RTFM, or look at the poster



Check the condition of the sideropes

On the photo we see that the shackles have been used often to keep the ladder in place. The photo shows really well what effect the steel shackles have on the manilla ropes: twisted and beaten up...just wonder if this ladder will pass the 30-month compulsory strenght test (ISO799-1/2019 10.4, for ISO certificate

the crew to keep a ladder in place, but is it actually securing the sideropes??? No it's not..when weight is put on the ladder, the ladder will move freely under the shackles until the next chocks and step has reached the shackles.

Basically the ladder will be held in place solely by step and chocks. Let's think back a moment, we have seen that each siderope can handle 2400 kilos and that a step can handle 880 kilos.

If or when the pilot launch hits the ladder, it will be ripped to pieces..880 kilos instead of 4800 kilos.

So we see that the shackles ruin the sideropes and that the force is put to the steps and not the sideropes. Why still use this setup would be an genuine question. The answer is simple: IMO allows it:

IMO A.1045(27): 2.1.1 the securing strong points, shackles, and securing ropes should be at least as strong as the sideropes speci etc etc.

This sentence is the only permission in the IMO regulations for using shackles over ropes, with the result we have seen on the photo.

Different countries (New Zealand, UK etc) have already declared shackles non compliant... have you rigged a ladder with shackles? Ok no pilot for you!



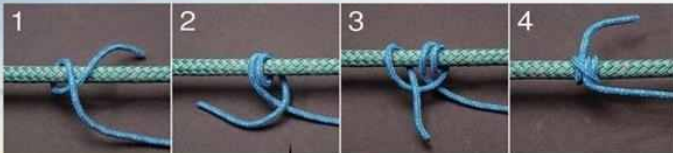
A lot of stress on the chocks and steps

Correct way of securing the ladder

After all the don'ts
best practice to secure the ladder to
strongpoints on deck?

HOW TO RIG PILOT LADDER PROPERLY

ROLLING HITCH KNOT



MAKE SURE THAT
ALL THE WEIGHT
RESTS ON THE ROPES

MAKE SURE
ALL STEPS ARE
PARALLEL AND THE
ROPES BETWEEN
THEM STRAIGHT

This is it...nothing to it, simple and safe!

We saw in the previous section that the securing ropes must at least have the same strength as the sideropes and that makes sense doesn't it? 4800 kilos secured by a rope of 4800 kilos strength (IMO A.1045(27) 2.1.1:securing ropes should be at least as strong as the side ropes >>24KN

The rolling hitch knot.

The better ladder manufacturers supply securing ropes with every ladder they provide. Use these ropes. Don't use some random piece of rope you have found in the bosun's shop or strops or what else.

It's an easy to do knot, every able seaman knows how to tie this knot.

No stress on the steps

No stress on the chocks

Sideropes will not be destroyed by the shackles.

The ladder will last longer and therefore save money to the shipping company.....

Epilogue

I hope you have enjoyed reading this article and maybe you've seen some practices used on your own ship. Don't hesitate to step forward and change it to a compliant system.

You want to be safe, so does the pilot boarding your vessel. You can be sure: I don't want to die climbing a ladder as unfortunately

happens again and again. People get hurt or die.

I have promised my loved ones to come back home vertically and not horizontally.

But..be aware, there are off course more non compliant ways to secure a pilot ladder..brackets, steel wires etc etc etc.

For now stay safe and godspeed!!!!

Arie Palmers
Registered pilot




ALL INDIA MARINE PILOT' ASSOCIATION, INDIA

All India Marine Pilots A... · 2d ✓
As long ship managers, managing ships for owners look for L1 quotes, the pilot ladder climbers' life is going to be cheap.

Our mass appeal to Ship Managers please look beyond L1 when life is question.

Help us reach Managers
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Ministry of Shipping and Office
Mansukh Mandaviya

Ship managers are not totally at fault for supplying substandard ladder. They are guided by the unique feature in their purchasing system as L1. Normally L1 is lowest price so is the quality. Aimpa's point is let's not go for the L1 or H1 kind of strategy to buy important equipment such as pilot ladder where the life of a climber can be in danger. We urge ship managers and owners to ensure that they supply right quality of Pilot ladders for use on board. Kindly have one as spare.

All India Marine Pilo... · 30 Aug ✓
In 2019 the [@Portoflondon](#) Authority alone saw a total of 88 Pilot ladder deficiency reports, and again seeing the trend continue into 2020 with 24 reported deficient ladders so far this year.

will the community do something together?

[@shipmin_india](#) sir our data??

The data collection in India is very poor. We have not data savvy country let alone analysing of such data for drawing best practices solutions. We have no reports coming up on non compliance pilot ladders as well as in correct rigging. AIMPA taking a step forward has made prototype pilot reporting app but so far not fully implemented. We as a community need to work together for such an initiative to find more non complaint ships.