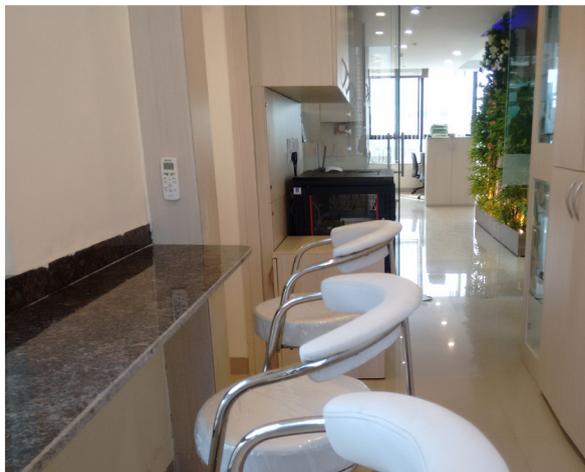
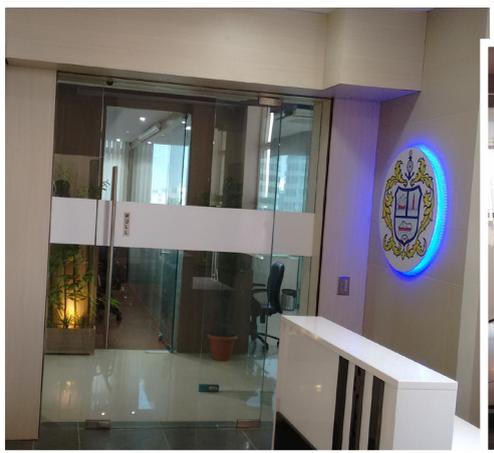


# COMMAND

*The Journal Of The Company Of Master Mariners Of India*



Interview with Capt. Anil Singh  
Sr. Vice President and Managing Director  
DP World, India Subcontinent Region



## **CMMI opens New Doors to the Industry**

The Company of Master Mariners of India

K Raheja Prime, 5th Floor, Sag Baug Road, Marol Industrial Estate,  
Off Andheri Kurla Road, Marol, Andheri East, Mumbai - 400059

द कंपनी ऑफ मास्टर मरिनरर्स ऑफ इंडिया

के रहेजा प्राइम, ५वा मजला, साग बाग रोड, मरोल इंडस्ट्रियल इस्टेट,  
ऑफ अंधेरी कुर्ला रोड, मरोल अंधेरी (पूर्व), मुंबई - ४०० ०५९





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# COMMAND

No. 77 / January 2017

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## CMMI opens New Doors to the Industry

Emailed articles in their completed form and photographs, for publishing in the 'Command' are welcome. These may be e-mailed to [office@cmmi.co.in](mailto:office@cmmi.co.in)





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**Capt Philip Mathew**

*Indeed a pleasure to pen down a few thoughts on our activities over the last four months.*

*Firstly, wishing you all a Very Happy New Year 2017. God bless you all.*

*It was indeed a matter of great satisfaction to have our new office premise inaugurated on 10th December 2016 by the noble hands of our most admired Capt. J. C. Anand, founder member and legend of the maritime Industry. On the same day, our new website was also inaugurated by Capt. P. S. Barve, another legend, ex- Nautical Adviser, Motivator and Trainer par excellence. The function was well attended by over 60 members. It was a milestone event in the history of our company. Many senior members present spoke with nostalgia and pride, that with the acquisition of our new property, we have accomplished a cherished dream. Our increased activities had for long necessitated the acquisition of a larger office. I take this opportunity to thank all who have helped us in this journey, with their moral and financial support, their valuable time, knowledge and energy.*

*We proposed to commence two day, weekend courses, at the new premises, on a monthly basis, on the Master Class model. For this we shall utilize the services of the best available talent in the industry and country for the benefit of Mariners, especially the younger lot, focused on mainly commercial and professional subjects. This should kick start our foray into the professional development arena. I invite committed members to meet at our office on weekends and utilize time to discuss and frame CMMI's independent views on maritime matters of interest.*

*We are considering the feasibility of holding Annual General Assembly of the International Federation of Shipmasters Association (IFSMA) in India in 2019. IFSMA has helped our representatives participate as a part of their delegation at various sessions of IMO. With CMMI's need to grow and have*

*more exposure on the international and domestic fronts, IFSMA seems to be a good launching pad - the platform being readily available only the effort from our end is required. Benefits are huge for CMMI and India overall.*

*Capt. Anand Shingatgiri and I, had the opportunity to attend MSC 97 in November 2016 at IMO, London. India had presented two papers at the session. The first one was on the Mandatory Instrument, addressing Safety Standards for the carriage of more than 12 Industrial Personnel on Board Vessels engaged on International Voyages. The attention of the Committee was drawn on the views of India on the proposed interim solution and certain additional factors to be considered while taking a final decision. The paper informed MSC to take into account the views expressed in Athens PAL Convention 1974, when the industrial personnel is excluded from the category of passengers and to consider the deletion of the references to SOLAS regulations I/4 and I/5 from the proposed interim solution. Our paper was well received. MSC 97 agreed that Industrial Personnel should not be considered as passengers.*

*A working group was established on the subject which was instructed to consider the papers submitted. An Interim Recommendation was developed on the Safe Carriage of more than 12 Industrial Personnel on board vessels engaged on International Voyages has been agreed. A new Chapter XV to SOLAS along with an associated Code will be developed. The Mandatory Instrument is expected to enter into force on 1st January 2024.*

*The Second paper was for development of an International Regulatory Framework for "Floating Armouries" as a new output. It was opined that before this subject was taken forward more papers would be invited for submission and discussed under the Agenda*

*item Piracy and Armed robbery against ships in the next meeting of the Committee.*

*It is indeed my pleasure to report that at the end of the first day of MSC 97 session, IMO's Bravery at Sea Award 2016 was presented to Capt. Radhika Menon of India, ex- Master of Indian vessel m.t. Sampurna Swarajya, recognizing her contribution in saving the lives of seven fishermen from a sinking fishing boat during a tumultuous storm in the Bay of Bengal in June 2015. Capt. Radhika Menon, first woman ever and probably the first Indian to receive this award received a standing ovation from more than 800 delegates from over 150 countries. The function was attended by the Indian High Commissioner and other officials from the Indian High Commission in the United Kingdom. IMO hosted a reception on this occasion. Heartiest Congratulations to Capt. Radhika Menon.*

*Our Seminar "Carriage of Dangerous Goods-Present Practices, Difficulties faced and the way ahead" was held on 21st September 2017. It was well attended and was a huge success. Shortly, we propose to have a joint seminar with Institute of Marine Engineers, India and the Institute of Naval Architects. This is aimed at building up a strong maritime constituency which will be beneficial to all of us and the nation at large.*

*I, congratulate our Chennai Chapter who organized and conducted a meeting of Chapter Chairmen and CMMI Wardens on 7th January 2017 at Chennai. Various issues were discussed in the most professional manner and a way forward reached. It was decided to have such meetings in rotation at our various chapters. An agreement was reached that our chapters must be encouraged to come out with projects and supported to culminate same. We would like to support the growth of our chapters in every way feasible. It was indeed a pleasure to meet and interact with our senior members at Chennai, at the occasion.*

*The onus of commitment and responsibility to see our Company reaching the aspired heights lies with each one of us who have the ability to meet*

*the challenges. I am indeed disappointed that some of the committees formed by us have not taken off as desired. Sacrifices have to be made; time can be found if the commitment is there. It is a realistic view that only a handful of wardens and members are actually hands on involved in our activities. I invite all the members, especially the younger ones to be actively involved in the activities of your company. Let us build a strong Maritime Constituency. To achieve our earnest desire, recently a meeting was held with sister organizations namely Institute of Marine Engineers of India and the Institute of Naval Architects, to explore ways and means of cooperating with each other and working together. A joint Seminar is proposed shortly. National needs require a strong Maritime Constituency.*

*Once again, I request all members to contribute to the enrichment of our Command Journal. Capt. Tescelin Almeida and Capt. Ashok Raghavan are doing a great job and need more assistance in order to maintain the standard.*

*My sincere thanks to all of our sponsors and members all over India whose constant support and advice we cherish.*

*We have lots of opportunities to grow, enthusiasm and efforts are the need of the day. Rabindranath Tagore's quote, "You can't cross the sea by merely standing and staring at the water", is a great motivation for me. We will succeed only we work for it.*

*Signing off until the next issue.*

*With fraternal greetings*

**Capt. Philip Mathews**

*Master/ Chairman*

*The Company of Master Mariners of India,*



## Editorial Board



Capt. S. Y. Limaye



Capt. Ashok Raghavan



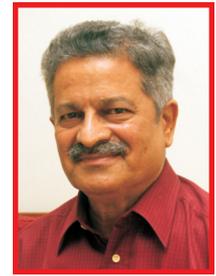
Capt. Kamal Chadha



Capt. C. M. Srivastava



Capt. H. Subramaniam



Capt. Milind Paranjpe

## From The Editor

*It's a January issue so let me wish all of you a Happy New Year 2017 and may you all have a wonderful year ahead.*

*In this article I have highlighted the inauguration of our new office for which the core team has spent many long hours of hard work. We are sure that our new office will bring us more prosperity and acclaim and that we will be able to serve the industry better. The interiors as you can see, are in comparison with, if not even better than any corporate could boast.*

*I am happy to inform you that we have not received any complaints regarding late arrival of the last issue and I thus conclude that the new courier service is doing a satisfactory job. Yet I do request you to promptly inform the office if anyone's journal is overly delayed. Please send an email to [ceo@cmmi.com](mailto:ceo@cmmi.com)*

*This issue has highlighted a number of events that have transpired pan India and I hope it serves to keep all our members aware and abreast of the effort being put in by all the CMMI Chapters across India. The Master, has highlighted this effort in more detail from His Desk.*

*I am proud to have interacted with Capt. Anil Singh, and have brought to you his interview. His achievements are indeed laudable and his views are something to admire.*

*Many members have commented positively about the improved standard of the Command Journal, and the rich articles therein and I do declare, there is no better motivation than appreciation. I profusely thank all the writers who have*

*contributed so willingly. I earnestly request you to send in your articles and you may even network with your friends and colleagues and pack my mail box with your papers. I am including sea poems and I request you to send in your originals. I said this last time but I shall reiterate, that editing the papers, though time consuming, is still a wonderful and enlightening pleasure. Going through each article and selecting the best ones for our esteemed readers is something very enriching. This issue covers papers ranging from ballast water management to fuel of the future, from leadership and motivation to the tech savvy sailor of the future and it takes you right into the depths of nautical knowledge. I have also included a small memoriam for Capt. Bhagwan Dass Kataria, who in his lifespan, has made the industry very proud.*

*I am sure you will enjoy this issue and I take this opportunity to request you for feedback. I assure you that even the smallest of feedback shall be taken seriously and considered by our editorial team.*

*Thank you, dear readers, until next time!*

*Capt. Tescelin Almeida  
Editor of Command*



Capt Tescelin Almeida





# The Company of Master Mariners of India

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## List of elected office bearers & wardens for the term 2015-2017 w. e. f. 7<sup>th</sup> April 2015 is as under.



**Capt Philip Mathews**  
*Master*



**Capt BK Jha**  
*Deputy Master*



**Capt KV Pradhan**  
*Secretary General*



**Capt SY Limaye**  
*Treasurer*

No	NAME	POSITION	No	NAME	POSITION
1	Capt Philp Mathews	Master	13	Capt Ashok Raghavan	Warden
2	Capt BK Jha	Deputy Master	14	Capt KG Ramakrishnan	Warden
3	Capt KV Pradhan	Secretary General	15	Capt MK Patankar	Warden
4	Capt SY Limaye	Treasurer	16	Capt CM Srivastava	Warden
5	Capt SM Divekar	Warden	17	Capt KD Bahl	Warden
6	Capt MR Paranjpe	Warden	18	Capt Mukund Kumar	Warden
7	Capt HJ Treasuryvala	Warden	19	Capt KN Deboo	Warden
8	Capt Navin Passey	Warden	20	Capt TA Almeida	Warden
9	Capt Ajay Achuthan	Warden	21	Capt SV Subhedar	Warden
10	Capt VN Aindley	Warden	22	Capt MP Bhasin	Warden
11	Capt NA Hiranandani	Warden	23	Capt Pankaj Kumar	Warden
12	Capt SM Halbe	Warden	24	Capt Parbhat Nigam	Warden

### The following are the co-opted wardens to the Court

- 1) Capt. N. M. Ramchandani - Chennai Chapter
- 2) Capt. Harish Khatri - Navi Mumbai Chapter
- 3) Capt. Pankaj Sarin - Delhi Chapter
- 4) Capt. G. K. George - Kochi Chapter
- 5) Capt. G. S. Ghuman - Chandigarh Chapter
- 6) Capt. Rakesh Jhang - Sailing Master



## Committees formed are as follows

### a) Training committee

Capt. K. N. Deboo  
 Capt. Y. Sharma  
 Capt. S. Bhardwaj  
 Capt. Ajay Achuthan  
 Capt. Krishnamurthy Iyer  
 Capt. M. C. Yadav  
 Capt. Dheeraj Kumar  
 Capt. Prabhat Nigam

### b) Technical Consulting Division

Capt. K. V. Pradhan  
 Capt. M. K. Patankar  
 Capt. M. P. Bhasin  
 Capt. Prabhat Nigam  
 Capt. K. D. Bahl  
 Capt. Tescelin Almeida

### c) Property Acquisition committee

Capt. N. A. Hiranandani  
 Capt. V. N. Aindley  
 Capt. S. M. Halbe  
 Capt. B. K. Jha

### d) Consultancy Cell

Capt. S. V. Subhedar  
 Capt. S. S. Naphade  
 Capt. K. G. S. Ramakrishnan  
 Capt. K. D. Bahl  
 Capt. G. K. George

### e) Membership Committee

Capt. K. D. Bahl  
 Capt. Pankaj Kumar  
 Capt. Prabhat Nigam  
 Capt. Tescelin Almeida  
 Capt. Dheeraj Kumar  
 Capt. M. P. Bhasin

### f) Compliance / Legal Advisory Committee

Capt. A. K. Bansal  
 Capt. V. N. Aindley  
 Capt. V. K. Gupta  
 Capt. Mukund Kumar

### g) 'Lifetime Achievement Award' And 'Sailing Master With Exemplary Service Record Award'

Capt. V. N. Aindley  
 Capt. K. N. Deboo  
 Capt. S. M. Halbe  
 Capt. M. K. Patankar  
 Capt. M. P. Bhasin  
 Capt. C. M. Srivastava  
 Capt. N. M. Ramchandani  
 Capt. Pankaj Sarin

### The CMMI representation on various Technical Committees / organisations are reconsidered as follows

Capt. C. M. Srivastava	Bureau of Indian Standards
Capt. Yogesh Puri	Central Advisory Committee for Light Houses
Capt. M. K. Patankar	Technical committee of IRS
Capt. Prabhat Nigam	Committee for Traffic Separation Scheme
Capt. Kapil Dev Bahl and	Formal Investigation - Grounding of MV Vishwa Amber -
Capt. V. N. Aindley	Court case no. 4399/s/2000-Marine Inquiry

### Other committees / Boards Dufferin Maritime Museum Committee

Dufferin Maritime Museum Committee      Capt. Philip Mathews  
 Capt. B. K. Jha

### Command Editorial Board:

Capt. Tescelin Almeida - Editor	Capt. S. Y. Limaye
Capt. Kamal Chadha	Capt. Ashok Raghavan
Capt. C. M. Srivastava	Capt. H. Subramaniam
Capt. Milind Paranjpe	

### Screening Committee for Elevation of a Member to "Fellow"-amended as follows:

Capt. V. N. Aindley	- Chairman ( Past Master )
Capt. K. V. Pradhan	- Member ( Secretary General )
Capt. S. B. Kundargi-	- Member ( Fellow )
Capt. N. M. Ramchandani	- Member ( Fellow )
Capt. S. M. Divekar	- Member ( Warden )
Capt. M. K. Patankar	- Member ( Warden )

### Change in nominations to the BES Trust New nominees of CMMI as Trustees on Board

1. Capt. Philip Mathews (Master)
2. Capt. B. K. Jha (Deputy Master)
3. Capt. K. V. Pradhan (Secretary General)
4. Capt. Mukund Kumar (Chapter Chairman - Kolkata)



# CMMI's 59th AGM appreciates contributions made by members

By Abhijeet Shinde (Marex Media) – edited for Command

[Mumbai, September 9]

The Company of Master Mariners of India (CMMI) held its 59th annual general meeting at the Royal Bombay Seamen's Society premises. Many objectives achieved during the year 2015-2016 were discussed and contributions of CMMI's members lauded during the meet.

Capt Philip Mathew, Extra Master, Senior Vice President and Principal of SCI's Maritime Training Institute (MTI), expressed appreciation of Capt Harjit Singh, who was appointed CEO of CMMI in February. He went on to review plans for the development of CMMI and the measures that have been taken to kick-start various initiatives.

Capt Mathew had earlier welcomed all CMMI members, thanked senior members for their presence at the AGM and acknowledged efforts made for the acquisition of the new CMMI office, making a special mention of the donors who had contributed towards the setting up of the new Andheri East office premises. He also acknowledged some members of the CMMI in person for their continuous contribution towards the growth of the company and made token presentations of gratitude.



Capt KV Pradhan, General Manager, Elite Mariners Pvt. Ltd, said, "CMMI has progressed by leaps and bounds over the last couple of years. A sea change has been observed in the approach of the members, who take pride in saying that they are part of CMMI."

Capt SY Limaye, Treasurer, said that there were huge opportunities for CMMI after the ISO certification. He thanked Capt LK Panda, Nautical Advisor to the Government of India, for his guidance. Capt Panda has been a big force pulling for CMMI and has supported the group in every possible way; he is a great inspiration.

Capt Limaye also explained that the memorandum articles of association, other documents and information would be henceforth available on the CMMI website. He conveyed special thanks to Siddharth Sinkar and Associates, Chartered Accountants, for auditing CMMI and giving financial guidance to the organisation.

Capt Limaye concluded the meet by announcing that the next AGM- including elections- would be held in August 2017.



# CMMI (Delhi Chapter) - World Maritime Day Seminar “Shipping Indispensable to “Make in India”

The Company of Master Mariner of India (CMMI); New Delhi Chapter’s celebrations were made to coincide with the global celebrations to have the right effect. And yes; World Maritime Day is a global observance and not a public holiday! So, did we have a full house! You bet! That is the reach of the CMMI Delhi Chapter under the Chairmanship of Capt. Pankaj Sarin!

It was no doubt a challenge to organise this seminar but due to the cooperation and support from many quarters it was successfully organised and had a smooth flow through its proceedings during the day. The

CMMI Delhi Chapter appreciates the financial support from several agencies; primarily the main sponsors – RBL Bank – apno ka bank and the Applied Research International (ARI).

Capt. Pankaj Sarin; Chairman CMMI-Delhi Chapter began the proceedings by welcoming everyone and highlighting the work of the Chapter, the objective being enhancing the knowledge of the seafarers in every way possible. He also showcased the importance of the CMMI and the



Honourable Chief Guest; Shri Amitabh Verma, IAS, Chairman IWAI, seen lighting the lamp



Honourable Chief Guest, conferring the “Lifetime Achievement Award” to Capt. J. S Gill

benefits of becoming a member.

Our Compere Capt. Saujanya Sinha, introduced The Honourable Chairman of the Inland Waterways Authority of India; Shri Amitabh Verma, IAS who was the chief guest of the day. Shri Verma was very articulate in delineating the importance of the inland waterways of India; its six National Waterways

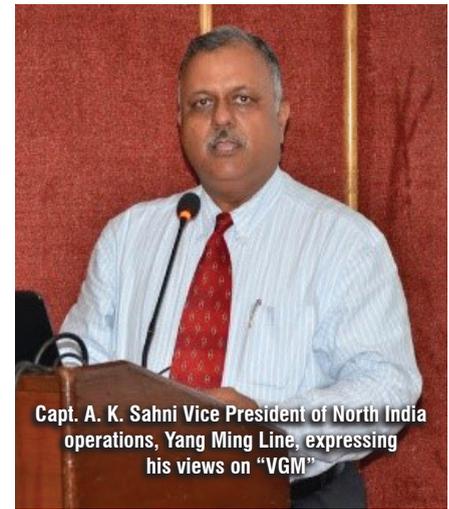


Guest of Honour, Capt. Harsh Khatri making a strong point during his keynote address



Achievement Award, 2016 was Capt. Joginder Singh Sher Gill.

Guest of Honour, Capt. Khatri; Deputy Nautical Advisor, Government of India, and Nautical Advisor Designate, Maharashtra Maritime Board delivered the keynote address where he talked



and designation of 106 waterways, which are awaiting approval. IWAI as an apex body for development and regulation of inland waterways under the Ministry of Shipping, Government of India was set up in October, 1986 by an Act of Parliament. Its role encompasses that of a provider, facilitator and regulator of the IWT sector.

Following the keynote address, Capt. N. B. Pandey, also a Guest of Honour, owner and promoter of Pentagon Marine Services, as well as Pentagon Maritime Training and Research Institute spoke on the importance of celebrating the World



passionately about the activities of the Maharashtra Maritime Board and how it is involved the port development activities around the coast of Maharashtra as part of the SAGARMAL Project of the Government of India.



The CMMI New Delhi Chapter deeply recognises the contributions made by the Indian seafarers and therefore it was befitting to recognise a longstanding seafarer for his overall contribution to the maritime fraternity in India and abroad by conferring the 'Lifetime Achievement Award'. The recipient of CMMI Lifetime



Maritime Day around the globe.

The Seminar began its first session with Capt. I. V. Sloanki; Project Director, National Inland Navigation Institute, Patna and Senior Consultant (Marketing and Logistics), Jal Marg Vikas Project, IWAI. He highlighted the investment opportunities in the inland waterways transport sector in the rapidly growing India of today,



**Capt. Vijay Kumar; Nautical Faculty, FOSMA Maritime Institute and Research Organization, underlining the future of global shipping with the SWOT Analysis**

which is gathering speed and very soon it will be “full steam ahead”!

Ensuring that one doesn’t get carried away by the flowing tide of port led development, Capt. Saujanya Sinha took a “Devil’s Advocate” view on also looking into the environmental aspects and thus finding a balance



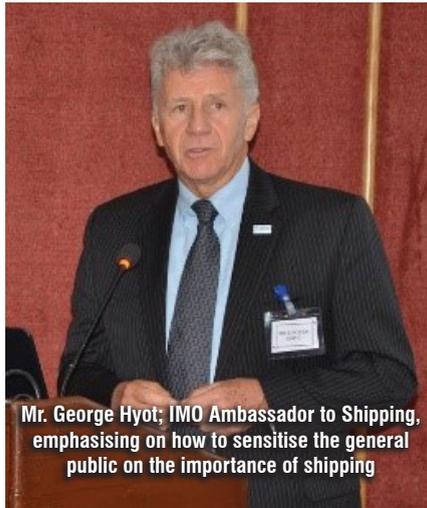
**Ms. Naomi Rewari; Founding member of Applied Research International (ARI), founding trustee of Capt. SSS Rewari Charitable initiatives and Head of Operations of ARI’s US office in California, shares her views on positive psychology**

between development and the marine environment to ensure sustainability of the “Make in India” dream throughout the SAGARMALA Project.

Under the “Make in India” campaign, coastal shipping needs the required

focus because it will provide tremendous cost advantages to Indian trade. This was highlighted by Capt. Sanjeev Khanijo in his presentation.

Thereafter, Capt. A. K. Sahni, spoke eloquently on a burning topic of



**Mr. George Hyot; IMO Ambassador to Shipping, emphasising on how to sensitise the general public on the importance of shipping**

world shipping; that of weighing and declaration of correct weight of containers, in light of the latest



**Mr. Mark Woodhead; Managing Director, KVH Media Group; UK paying a tribute to “Abu”**

SOLAS amendments that came into force on 1st July 2016 regarding the “Verified Gross Mass” (VGM) now being mandatory. Capt. A. K. Sahni Vice President of North India operations, Yang Ming Line, expressing his views on “VGM”

Next, Capt. Tushar Kanti Dhingra



**Mr. Mark Woodhead; Managing Director, KVH Media Group; launching and presenting the book to Mrs. Anu Mehrotra**



gave a wakeup call towards the LNG as Ship Fuel – Friendly Fuel for Future! There is a compelling need as it is eco-friendly, very less emissions, available in plenty, cheaper, and very importantly - MARPOL, Annex VI, post 2020, no other fuel can meet the emission standards. It is indeed the ideal way to look forward to the future because it is environmentally desirable, technically feasible, regulatory background under final development and commercially attractive.

To end the pre-lunch session the audience was provided a “food for thought”, but not as an appetiser, through the SWOT Analysis of global shipping by Capt. Vijay Kumar.

Following a sumptuous lunch, the seminar continued with an “out of the box” presentation by Mrs. Naomi Rewari who by showing a brief video on positive psychology followed it by asking questions to the audience

and making the session extremely interactive, thought provoking and stimulating.

To end the session the IMO Ambassador for Shipping, Mr. George Hyot shared a thought provoking talk on how he had successfully launched “Take a Ship” campaign in a few schools to make the non-maritime public aware what maritime transport is all about.

There was a very sad moment for the maritime fraternity when a very dear member of the fraternity suddenly passed away in July 2016. He was the always smiling, always respecting and always respected Capt. Abhilash “Abu” Mehrotra. His parent company; KVH Media Group; UK; had started a wonderful gesture by floating an online blog where one and all who came in contact with our very own “Abu” could write their feeling about him.

The response was stupendous!

Therefore, under the tutelage of its Managing Director, Mr. Mark Woodhead, the responses were published into a book by the KVH Media Group; UK! And what better a gesture to remember “Abu” than to launch and present this book to his wife, Mrs. Anu Mehrotra, and in the presence of their two daughters, Ila and Nandini.

As a first in the recent seminars in New Delhi in the past few years, the Chairman, Capt. Pankaj Sarin strongly felt that there needs to be a succinct compilation of the seminar that everyone should take home with, to mull upon, to suggest, and to disagree so that we can continue to build upon the synthesis:

Let the Perspective realise into the Promise;

**Let the MARITIME FRATERNITY  
make the “Make in India”  
movement a REALITY!**

# Analysis of Ballast Water Convention & Evaluation of Ballast Water Treatment Systems

## Introduction

Across the globe marine and freshwater ecosystems are being invaded by non-native organisms. These invasions are referred to as 'bioinvasions'. Bioinvasions consist of the transport of plants, animals, bacteria, viruses and fungi to new environments where these newly introduced organisms have the potential to detrimentally affect ecosystems.

Most transport vectors are associated with human activity and those which are currently responsible for the most introductions are related to the shipping industry i.e. through hull fouling communities and the water in ballast tanks and sea chests.

There is a vital need for adequate treatments to be developed to prevent this constant movement of organisms to new areas where they are establishing populations to the detriment of the local flora and fauna.

## On Board Ballast Operations

After the adoption of International Ballast Water Convention, many scientific and technological researches were held and proposed management alternatives. The main headings of these alternatives are ballast water exchange, on-board treatment and onshore treatment. The diagram below provides information on the contents of Ballast Water Management options.

The first step of the ballast management is to take in as clean as possible ballast

### Not Ballasting;

- ✓ in areas that are known to contain

harmful organisms or phytoplankton blooms, in areas with local outbreaks of infectious water-borne diseases, with poor tidal flushing, with high sediment loads, near sewage discharges, dredging operations in shallow water, where propellers may stir up the sediment, not ballasting at seasons when harmful plankton are abundant,

Also;

- ✓ at night when many types of organisms- benthic, epibenthic and planktonic organisms- migrate closer to the surface,
- ✓ ballasting through intakes located high on the ship's hull when in shallow water, to avoid entraining bottom sediments or organisms living near the bottom,
- ✓ loading fresh water as ballast when expecting to deballast in salt

water; and salt water as ballast when expecting to deballast in fresh water.

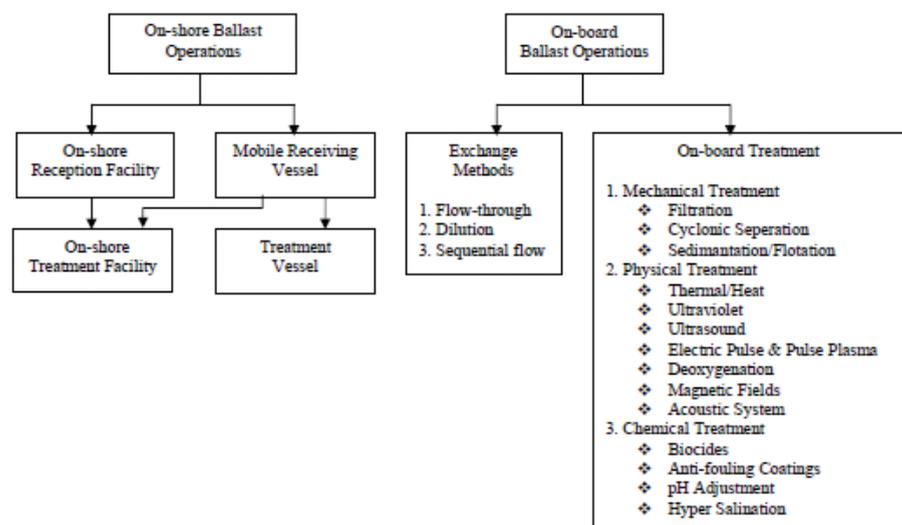
Not disposing/ deballasting;

- ✓ of ballast tank sediments,
- ✓ near aquaculture areas, seafood harvesting areas, marine sanctuaries or parks, coral reefs or other sensitive sites (6).

## Ballast Exchange Method

The main method suggested by IMO in the Convention is the exchange method. Careful and attentive practice of this method is necessary, in order to maintain it as an alternative until 2016. By using exchange method, the species taken in from coastal environment thru ballast water and exchanged via exchanged method during the voyage, are no longer coastal species, therefore exchanged species due to the different ecosystem shall not be

Ballast Water Management Options



able to survive at the environment of the destination port. Negative weather/sea conditions cause the stability of the vessel and pressurizing ballast tanks damage the ship during the exchange operation. There are many restricting factors of the ballast water exchange operation, the most important effect is stability due to low GM, exceeding limits of BM and SF and free surface effect. Three different types of exchange methods are stated in the Convention: Sequential Method, Dilution method, and Flow-through method (6).

Sequential method as “a process by which a ballast tank intended for the carriage of ballast water is first emptied and then refilled with replacement ballast water to achieve at least a 95 per cent volumetric exchange.”

Dilution method is “a process by which replacement ballast water is filled through the top of the ballast tank intended for the carriage of ballast water with simultaneous discharge from the bottom at the same flow rate and maintaining a constant level in the tank throughout the ballast exchange operation (15).”

Flow-through method as “a process by which replacement ballast water is pumped into a ballast tank intended for the carriage of ballast water, allowing water to flow through overflow or other arrangements.” The flow-through method involves pumping open-ocean water into a full ballast tank. Ballast equal to approximately three times the tank capacity must be pumped through the tank to achieve 95% effectiveness in eliminating aquatic organisms (15).

### **Ballast Water Treatment Systems**

Mechanical, physical and chemical types of process technology used in ballast water treatment. This section ‘Ballast Water Treatment System’ is

citation from PhD Thesis, Inmeler C. Ballast Water Management In Tankers.

### **Mechanical Treatment**

Filtration, cyclonic separation and sedimentation/flotation are among the alternatives of mechanical treatment.

- **Filtration:**

Inactivation Process: Ballast water can be filtered before it enters the tanks or while it is being discharged. The advantage to filtering as water is pumped into the tanks is that organisms that are filtered out may be retained in their native habitat. If ballast water is filtered while being discharged, proper disposal of organisms is required to eliminate accidental introductions. A back washing mechanism cleans the filters and collects organisms to prevent their accidental release.

- **Cyclonic Separation:**

Inactivation Process: The system basically vortexes the water, forcing the heavier particles to the outer portion of the pipe. Once this occurs, then the outer portion of the water can be separated out or the particles can be collected in some type of collection system.

### **Physical Treatment:**

Thermal (Heat), ultraviolet, ultrasound, electric pulse & pulse plasma, deoxygenation, magnetic fields and acoustic systems are among the alternatives of physical treatment

- **Thermal (Heat) Treatment:**

Inactivation Process: Heat kills aquatic organisms by denaturing cellular proteins and/or increasing metabolism beyond sustainable levels. Death by metabolism shutdown generally occurs quicker and at lower temperatures for more complex organisms. Thermal

treatment effectiveness is a function of species’ tolerances, temperature, and exposure period. Most microorganisms are able to tolerate relatively high temperatures for short periods, and lower temperatures for longer periods.

- **Ultraviolet (UV):**

Inactivation Process: UV treatment triggers photochemical reaction of cellular nucleic acids. When a microorganism is exposed to UV radiation, the energy is absorbed by the organism’s DNA. If the organism receives a sufficient number of UV photons in a short period, covalent bonds form between adjacent bases in the DNA. The formation of these bonds prevents the organism’s DNA from being “unzipped” for replication, and the organism’s cells are unable to reproduce.

- **Ultrasound:**

Inactivation Process: Acoustic systems use transducers to apply sound energy of specified amplitude and frequency to water to be treated. Ultrasonic systems use transducers to convert electrical energy into vibratory energy of a specific amplitude and frequency. When this energy is passed through liquid, microscopic gas bubbles quickly form, expand, and implode. In the area immediately surrounding the bubbles, there are extreme temperatures and pressures, which increase chemical reactivity, polymer degradation, and free-radical production. Exposure of aquatic microorganism to ultrasonic treatment results in cellular disruption and organism death.

- **Electric Pulse:**

Inactivation Process: In pulsed electrical field technology short burst of energy are used to kill organisms in water. In pulsed electrical field technology, water is passed between

two metal electrodes. The water is subjected to an electric pulse which produces short energy bursts at a very high power density and pressure. The energy generated, and transferred to the water, is strong enough to electrocute an organism. If used in a ballast water application, the transfer of energy would theoretically kill the non-indigenous species.

- Deoxygenation (Oxygen Deprivation):

Inactivation Process: This treatment accomplishes the removal of ballast water organisms by extracting the dissolved oxygen from ballast water. One of the methods is purging the oxygen from the ballast tanks with nitrogen through the use of chemical additives,

- Magnetic Fields:

Inactivation Process: Strong magnetic forces interfere with organism pH levels, which in turn support the cell's organelles and proteins. Magnetic forces also interfere with the flow of ions in the cell membrane, resulting in death. A typical magnetic system consists of a magnet or electromagnet attached to the piping system.

### Chemical Treatment

Biocides, anti-fouling coatings, pH adjustment and hyper salination are among the alternatives of chemical treatment.

- Biocides:

Means of Application: Biocides could be applied in two ways:

1. Concentrated solid or liquid chemicals could be added to ballast water in certain ratio. The amount of premixed liquid biocide could be added via feeding lines to the main line with the main ballast pumps.
2. It could be generated electrolytically from sea water.

- Oxidizing Biocides:

Inactivation process: Oxidizing biocides act by destroying cell membranes which leads to cell death is hazardous for organisms. Oxidizing biocides include, but are not limited to, chlorine, bromine, iodine and their multiple compounds, chlorine dioxide +-(ClO<sub>2</sub>) and hypochlorites (e.g., NaOCl), hydrogen peroxide(H<sub>2</sub>O<sub>2</sub>), ozone (O<sub>3</sub>) and Paraclean® peroxy acetic acid.

- Non-oxidizing Biocides:

Inactivation process: Non-oxidizing biocides act by interfering with a necessary life function such as metabolism or reproduction (the physiological and metabolic processes of organisms). Non-oxidizing biocides include, but are not limited to, such compounds as Acrolein®, Seakleen®, Peraclean® Ocean, tributyltin, dissolved copper, dissolved silver, glutaraldehyde, and organic acids.

- Ph Adjustment:

Inactivation Process: Sudden changes in pH, and the addition of an acidic or alkaline compound to increase or decrease the pH of ballast water has been considered as a method of disinfecting ballast water. The corrosion rate of carbon steel is not influenced by pH over the range of 4.5 to 9.5 in distilled and tap water. Below pH 4.0, hydrogen evolution begins and corrosion increases dramatically.

- Hyper salination:

Inactivation Process: Hyper salination involves the addition of large quantities of sodium chloride (salt) to ballast water to create a super-saline environment. The sudden increase to extreme levels of salinity destroys cells through dehydration.

### Conclusion

IMO Ballast Water Convention is essential to prevent further spread of invasive species and their potentially devastating impacts on ecology and economy in areas where they do not belong. Various systems were developed under mechanical, physical and chemical treatment categories that address to various vessel types, sizes and ballast capacities. Nowadays, compact treatment systems are developed which use the state-of-the-art technology, having relatively lower costs, with minimum human factor, owing to the experiments conducted both in laboratories and on-board.

Each of the ballast treatment alternatives eliminates different living organisms with different methods. While the living organisms that are affected by each system are different, the systems have many advantages and some drawbacks within themselves. In short, no system is perfect stand-alone. The most used would be combination systems.



The above article credit to :  
**Capt. Tugsan Isiacik Colak** (Captain Lecturer at Istanbul Technical University - Maritime Faculty)

*Doctor of Philosophy (PhD) Scholar, Satellite Comm. and Remote Sensing Techn., 2012 – 2016 (expected); Master's Degree, Maritime Transportation Engineering, Istanbul Technical University 2009 – 2011, Chief Officer of Training Vessels; Oceangoing Master Licence since*





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# Interview with Capt. Anil Singh

**Sr. Vice President and Managing Director**



Speaking to Capt. Anil was such a pleasure. A man of great stature, yet so humble in his demeanour. At first I was worried about the elaborate questions framed by Capt. Ashok Raghavan but my worries were assuaged, as Capt. Anil's answers to each question, were elaborate, enlightening and extremely lucid. On behalf of CMML, I thank Capt. Anil for his precious time and for his valuable views. I trust that each reader will benefit tremendously from reading his interview.

The Editor.

## **1. Nearly four decades ago, you decided to enter the port operations, when the proportion of seafarers in the port sector must have been low. What was your motivation to leave sailing at the time?**

I joined India's merchant marine as the first batch of T.S.Rajendra in 1972 and worked on container ships and cape size ships for an array of companies, starting with erstwhile Scindia Steam Navigation.

In 1983, I decided to come ashore to explore other opportunities in the maritime industry. I was seeking a different challenge that allowed me to advance my career in a unique manner. After a brief stint as a Nautical Surveyor in Mercantile Marine Department, Mumbai, I went to Papua New Guinea, where I was involved with setting up shipping of copper concentrate for Ok Tedi Mining, this involved chartering, and designing customized ships on the crocodile infested "Fly River". Pioneering stuff!!

Another key motivation was also the need to be with my family. Shifting my focus to land based operations allowed me to spend more time at home, and strike the balance between work and home life.

## **2. Who has been your inspiration in life?**

One of my inspirations in life has been Capt. J.C. Anand. As a young cadet on T.S. Rajendra, Capt Anand, then a ship owner, came to conduct a lecture to the cadets and I was so enamored with him. I thought, "That's what I want to be like." Capt. J.C. Anand still remains a leading light, now as a dear friend and mentor.

## **3. You started your career in port operations with P & O Australia. Please throw some light on your initial challenges when working in this sector.**

I worked with P&O Australia at a senior management level for 13 years of which 8 years I served as the Group Managing Director of Century Group of Companies in Papua, New Guinea. I was the company's youngest ever Managing Director, and the only Asian at a senior level.

For P&O, I built a business in transportation systems for Copper Concentrate on the 900 km long Fly River in Papua New Guinea (PNG). For Rio Tinto I worked in Lihir Gold Mine providing waste barging of excavated material. Similarly, working in PNG to provide logistics support to drilling rigs and equipment to Chevron. I could write a book on "Trial and Tribulation" in jungles of Papua New Guinea.

Over the past 45 years, this business has grown and taken a new dimension. The face of the business has changed in terms of the technology advancement, business development or whether you look at the acquisitions that we made, all of it is very exciting!

This journey did not come without its challenges because building something new means that there is no system in place which you can follow, and we had to create all our operations from scratch. This, coupled with the fact that I was much younger than my associates meant that I had to work twice as hard to achieve my goals.



Despite these challenges we created a legacy during my time at P&O Australia, and this was the thrilling part of my career.

**4. You worked with Nhava Sheva International Container Terminal as their CEO setting up one of the early PPP projects. Please enlighten us on the initial bottlenecks in the execution of the project and what steps were needed in overcoming the concerns of the various stakeholders.**

Nhava Sheva International Container Terminal was the first PPP project successfully implemented in India. When it opened for business in 1999 it changed the face of container terminal operations in the country. Within a year of commencing operations NSICT put Jawaharlal Nehru port on the world map as a “1 million TEU” port. What followed was remarkable. Container trade began to flourish in India.

Our goal was to ensure that the terminal had the most modern facilities and infrastructure in India. To achieve this we had to bring about a paradigm shift as well as a different way of thinking. For example, our operations had to be paperless – all financial transactions with customers, vendors and stakeholders were to be carried out on cashless basis, and done electronically through direct banking channels. In addition to this we were putting completely new operational systems in place, and having to convince external stakeholders that these were more productive than those already in place.

One of the biggest challenges was change management; changing the behavior of the people, and training them to operate in a manner that aligns with DP World’s values and commitments. A significant moment for us was when we saw other terminals mirroring our practices because it meant that they were operating in a more efficient and sustainable manner. DP World has been a pioneer in modern port operations in India.

**5. You have overseen major projects in various parts of the world including Africa and South America. What has been your experience in executing these projects?**

I have dedicated over 45 years to the maritime sector, building businesses in some of the world’s most challenging areas. I was involved in building and operating ports in Djibouti, Dakar in Senegal, Maputo in Mozambique, and Algiers and Djen Djen in Algeria. Whether it was setting up ports in remote Africa or providing a logistics supply chain from Timbuctoo via Bamako in Mali to Dakar.

**6. DP World group chairman and chief executive officer Sultan Ahmed Bin Sulayem in Feb 2016 mentioned that “the group will invest over \$1 billion in brownfield container terminals, greenfield container terminals, logistics parks, inland container depots, container rail facilities and basic infrastructure facilities required for business expansion”. Which are the projects of DP World that are currently underway and under active consideration?**

We are always on the lookout for new opportunities and go where our customers want us to be; where there is demand.

India is a major partner of the United Arab Emirates in terms of bilateral trade and we have built a strong market position here, investing over US \$1.2 billion up to now. Last year we announced our intention to further strengthen our presence in India by seeking investment opportunities worth over US \$1 billion over the next few years.

These investments will be in different parts of the country. We are investing in new ports and also in facilities such as inland container depots and rail rolling stock that will improve inter-modal services in India.

We are reinforcing our commitment to enabling India’s growth and economic development through our operations in the country. Our decisions ensure that we have a long-lasting positive impact on the Indian economy and the communities in which we operate.

**7. Indian government along with the various stakeholders held the Maritime India Summit 2016 in April 2016. In the light of the vision envisaged by the Prime Minister of India,**

- a. **How far have we come in moving towards our shared vision?**
- b. **What more needs to be done to reach our goal?**
- c. **Are global investors getting excited in Indian shipping and port infrastructure development?**

The government recently took a significant step towards our shared vision by way of the Sagarmala project. This initiative will support and enable port-led development through appropriate policy and institutional interventions, focus on port infrastructure enhancement, and create efficient evacuation to and from the hinterland. DP World’s investments in infrastructure throughout our network of terminals in the country will no doubt be an aid to the Sagarmala initiative.

DP World has invested in the development of five international gateway ports in India and we believe that



making ports more productive across the country, rather than building more green field sites is the way forward. There is also a great need to reach internal markets, invest in cold storage facilities and networks, using coastal and inland waterways to increase efficiencies and lower costs.

Meanwhile, we are reinforcing our commitment to economic development through our operations in the country, where we have invested US \$1.2 billion to date, supporting over 30% of India's container trade. We are also looking for investment opportunities worth over US \$1 billion over the next few years.

Global investors, the UAE in particular, see India as a key market to invest in. There is an estimated US\$8 billion UAE investment currently in India, of which around US\$3.01 billion is in the form of foreign direct investment, while the remaining is portfolio investment. On the flip side of the coin, UAE is the second largest export destination of India, with an amount of over US\$ 33 billion invested in the Emirates.

**8. DP World is encouraging startups by identifying promising young entrepreneurs and providing seed funding. Based on the response you have received till now,**

- a. Do we see DP World becoming the focus for new entrepreneurs?
- b. Are there any plans to develop incubator labs for helping startups?

I think it's very important to encourage startups and the

youth to build their confidence, as well as ensure that they are aware of crucial role trade and logistics play in the global economy, and inspire them to actively participate in the industry.

The Maritime industry of India has played a vital role in the growth of the country's economy in the recent past. The Maritime India Summit 2016 provided an excellent platform through the "MIS 2016 - DP World Prize" contest, which aimed to bring forth fresh and innovative concepts in the maritime and associated sectors. It was an aggregator platform to motivate young entrepreneurial talent present in our country.

As an organization DP World is committed to the growth and development of the maritime industry in India. The 'MIS 2016 – DP World Prize' contest was a platform that rewarded entrepreneurs who had game-changing ideas that could provide an impetus to the industry

We at DP World have ensured every initiative we undertake has a long-lasting impact on economies and the sector. We have taken various steps towards building a platform for startups to put forth their innovative concepts to the industry.

**9. You are one of the WISTA ambassadors. Though WISTA has been present for over four decades, it is only now that representation of women in shipping and port sector is seeing some progress.**

- a. What are the reasons for this slow growth of women participation?
- b. What more needs to be done by the industry to make their participation more attractive?
- c. When do you anticipate, the industry reaching a gender-neutral status?
- d. How are different countries encouraging this trend including India?

Over the last few years, the shipping industry has witnessed a shift in leadership. Although this shift has been relatively slow in the shipping and ports sector, there has been a definite evolution in the representation of women. WISTA has provided a platform for accomplished women to exchange knowledge, work experience and their overall contribution to the maritime industry. It has helped bring together like-minded individuals and has facilitated mentoring and awareness programmes to shed light on the various growth opportunities available to women in this erstwhile male-dominated sector.

One of the biggest challenges faced by the maritime industry today is the lack of awareness about the industry. Very few curriculum's focus on port management.

We would need to start from scratch by introducing a comprehensive curriculum dedicated to this industry at the school and college level. Furthermore, women receive little encouragement to face what is a primarily male dominated career path due to a lack of role models in the field. Countering misconceptions about entering this field is a key area of development for groups like WISTA to focus on.

To counter some of these issues, the industry should be actively taking steps to encourage women to explore a maritime career. The maritime industry should attempt to pool in their resources in order to facilitate this initiative. A two-pronged approach involving awareness programmes and introducing relevant courses would ensure that the youth can make a better-informed choice.

While awareness programmes and the introduction of a maritime curriculum will be the best way forward for women and the youth alike; another factor which would interest women in particular, would be an overall perception management activity. This would considerably alter its image from a male-dominated/hierarchical occupation to a gender neutral career option. There is a need to highlight roles within the industry that women would find favourable. It is crucial that organizations communicate these roles to prospective female candidates so as to equip them with the right information and encourage goodwill, the continued efforts of groups like WISTA, who are dedicated to attracting more women to the industry and supporting women in management positions, greatly aid the process of creating a gender-neutral industry. We support women in institutions like Narottam Morarjee Institute of Shipping.

### **10. Recent referendums and elections across the globe have shown a marked trend towards trade protectionism. How is this going to affect the free trade and the effect on shipping and port sector?**

There are several ways in which free trade and the shipping and port sector could be affected by these referendums and elections. There will be an economic impact that will affect the purchasing power that different currencies have. Furthermore, assuming that any current free trade agreements are cancelled, countries will have to explore other channels for trade, changing the way that shipping and port sectors operate.

### **11. The current demonetization by the Indian government is seen positively by some economists while others see it as negative to neutral. How do you anticipate the effect of**

### **demonetization on the shipping and port sector?**

DP World terminals in India have long implemented cashless practices. For example, all financial transactions with customers, vendors and stakeholders are done electronically through direct banking channels. Thus, the implementation of demonetization has not had a direct effect on our supply chain. However, shippers and cargo owners who had a high content of cash transactions have been affected adversely by the tightness of cash availability.

I anticipate that we will see more cashless and paperless transactions replacing the old system of hard cash. The government is unyieldingly driving for electronic transactions with customs and regulatory authorities, web-based transaction platforms and solutions offered by Terminals, and the adoption of new technologies like RFID (radio frequency identification), OCR (optical character recognition), various smart cards and gate automation systems happening at locations like toll plazas and Terminal gates – these advancements will ensure that paperless transactions in the supply chain will be on the increase. These initiatives will add to the ease of doing business, and are completely in line with the Digital India vision that our Prime Minister has focused on.

### **12. What are your greatest passions besides your dynamic career?**

My commitment to sustainability for the environment and also for women's education which is equally important to me. I believe all organizations should commit to sustainability and strong CSR policies to build sustainable business for their customers as well as our society.

In addition to this, I enjoy mentoring and encouraging young entrepreneurs who are interested in participating in the trade and logistics industry. I used mediums like Chambers of Commerce and NGOs to support uplift of underprivileged young men and women.

### **13. How does a busy leader like you maintain your work life balance?**

To me, balance is not a percentage of time assigned between work and personal life. Balance is the right combination of things that bring out my best. It is important for one to establish boundaries and set fair limits about what one will do at work or outside work. I have already established the above and so it allows me to appreciate both my work and personal space in their own time. I also prioritize health in my everyday routine and doing this helps relieve stress, improves mental clarity, boosts the immune system, and I find myself being happier and more productive.



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*A tear drop trickles down a sad brown cheek; Melancholy strikes within;  
But darkness is done, sunshine will come, tis sure to be bright again.*

*Cirrus high like silken lace holds the moon from a fall;  
Soft cumulus suspended in space; Cotton puffs to sooth the soul.*

*Dewdrops glistening on lashes long form raindrops to colour the sea;  
Early young dolphin sings out his song, as he splashes about with glee.*

*Eagle and albatross join in a cry which pierces the purple dawn;  
Sleepy blue ocean wakes up with a sigh; Small waves begin to yawn.*

*Then the sun peeps over the horizon; My lips part in a smile;  
In the beauty around me I see your face; The world is a beautiful place.*



*This poem was written by your Editor, Capt. Tescelin Almeida in 1986,  
on a long lonely voyage across the Pacific*





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# Leadership Management and Motivation leading to Team and Teamwork

Capt Ajay Achuthan

There is a general confusion between Leader and leadership, Manager and Management. This paper tends to clarify same. Further the ISM code requires the Master to motivate his Crew to implement the code. What type of Motivation will help? Are we to skill the Master with something other than motivation skills. The answer lies in Transformational skills.

Synergistic solutions, since 1997 introduced two assessment questions for students VRM course and later in Mates Phase I to get to learn the subject matter, which they had to illustrate with 3 examples.

- Clarity of Purpose is a prerequisite for Effective Management and Teamwork.
- Management is process of converting available resources to useful purposes, effectively and efficiently
- Motivation is a process by which the entire team is aligned with the stated purpose and is consciously redirected and controlled to take actions consistent with the purpose, strategies and conversations

There three essays are suggested to lead a participants to discover Leadership, Management and Motivation.

Before examining Leadership Management and motivation it is imperative that we examine the basic question

- Who am I?
- Who are you?
- What is the true meaning of Namaste?

Am I my Roles/ Responsibilities/ Activities? Or can I dig further into my core?

That's when I can discover my Spiritual Elf (SELF) © Synergistic solutions, 2005.

Can I distinguish my Body Mind and Intellect (BMI) as separate from my SELF?

Will my Ego permit me to separate the BMI from my SELF. Can I discover my BEING?

Once I can achieve this I will settle on two simple distinctions? Am I a Human being (Being Human) with a spiritual experience? OR

Am I a Spiritual Being with a human experience?

Leadership cannot be distinguished without being Spiritual. This is when I discover that Leadership is a space and not a person (Leader). That space is filled with Purpose and Possibility.

While Leadership is about Purpose, Managing is about Processes and Motivator deals with People. As Peter



Drucker states that we are at all times dealing with Purpose (Leadership) , Processes (Management) and People (Motivation).

Leadership is a space of being. It exists in the language of Intention, Vision, Mission, Policies, Goals, Functions, Tasks, Activities, General and Specific Learning Objectives, etc..

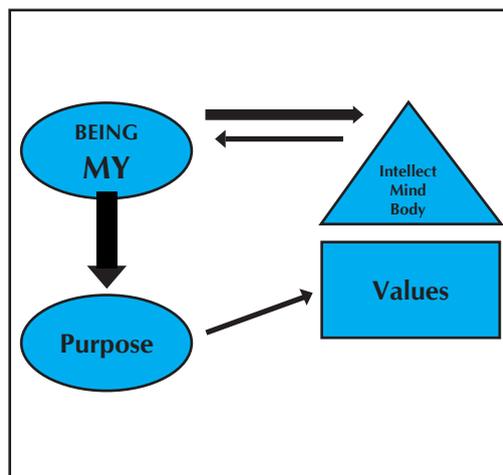
Management is about doing. It can be at strategic and tactical levels. This can then be further related to Management, operation and Support levels.

Motivation is about having. Needs, wants, Greed. What make a person carry out a Job or Duty or become a contributor.

In some Areas it can be seen that Leadership and Management Merge

In Jargon, the 5 Wives and one Husband are very useful to set the thinking, doing clear. What and Why refers to Leadership and Purpose whilst Where, When, Who and How refers to Management and Motivation

We are aware that many IMO



Legislations are Reactionary. Corrective action being taken after the loss. Incident analyses (accidents and near misses) have revealed that a fairly high percentage is related to lack of effective Leadership Management and Motivation.

Within the above self generative forms for LMM the natural effect is Team and Teamwork.

Team competencies are lesser addressed from a self generative mode. Some of the competencies identified thus far by Synergistic Solutions are:

- Alignment to purpose
- Completion with Each member of Team
- Alignment of each member to new possibility
- Accountability defined by individuals towards the team goals
- Declaration by Individuals towards Team goals, purposes
- Carrying out Management of Risk or Functions , Tasks and activities
- Defining Strategic and Tactical levels
- Existence structure for keeping the Strategic and tactical decisions alive
- Taking action consistent with Purposes, functions, activities
- Using Records and Manuals at Individual and Team levels
- Reporting Near Miss/ Accidents and corrective action towards



#### Teamwork

- Reporting Completion
- Getting down the gangway (Being Complete and move on remembering that Teamwork has a Beginning and End )

The CMMI is urged to take up the cause of creating and restoring Leadership, management and motivational skills leading to Team and Teamwork in the Maritime Industry. Since many seafaring organisations dwell in a compliance culture we need to do this with the blessings of DG Shipping to reach out to all our workforce.

The final discovery for me personally in this journey was that “The Highest form of Practical’s is Theory” Lets restore the theory of yester years into our Maritime Profession so that effective practices evolve for its growth and development.

There are many Management and Leadership and Motivational theories based on an outside-in approach and one is quite confused as to which one to use when. Synergistic Solutions attempts to pursue an inside out approach based on ancient Indian Philosophy of “Aham Bhrahmasmi” and discovery of SELF as a prerequisite for Leadership Management and Motivation. One can then access abundance at all levels of Body Mind and Intellect and truly bring out the Transformation of SELF and Human Beings (who are different forms of one SELF) towards effective Team and Teamwork Caused by Leadership, Management and Motivation

Synergistic Solutions thanks CMMI for giving this opportunity to present this case to such an August Audience

(Capt. Achuthan is an Extra master, MBA who has sailed for 5 Years in Command and has Experience working with SCI (INSA), FOSMA as Faculty and Crew Manager and MASSA as the founder Principal of MASSA Maritime Academy and Later its first Executive Director and CEO.

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# CMMI discusses safety measures in handling dangerous goods

- Abhijeet Shinde

[Mumbai, 21 September]

A recent Company of Master Mariners of India (CMMI) conference discussed various measures of handling dangerous goods during transportation. The conference was held at the offices of the Indian Register of Shipping (IRS), Powai, with the focus on the carriage and storage of hazardous material.

The conference was hosted by Capt Tescelin Almeida, Programme Head and Assistant General Manager, Anglo-Eastern Ship Management Ltd. Capt. Philip Mathews, Master / Chairman, CMMI, greeted all participants, guests and senior officials, saying, "It is a concern for the ship-owner and marine life if dangerous goods are not handled under proper guidelines."

Capt. K.P Jayakumar, Deputy Nautical Advisor to the Government of India, was the first speaker; he made a presentation on the regulatory framework connected with dangerous maritime cargo.

Capt. J.S Gill, FCMM, FISE, F Inst. R.T. FCILT, Ex. Vice Chairman CILT and Member of CMMI, was the Chief Guest at the conference; he had come all the way from Delhi despite the heavy rains. His presence underscored his interest, dedication and passion for the subject.

Capt Devbrat Mishra, CEO, Esquire Infolab Systems, reviewed the International Maritime Dangerous Goods (IMDG) code and the current pitfalls of IMDG export. He defined risk management (safety, training, inter model transport). "In the next ten years robotics might handle dangerous

containers," he said. "Lower human exposure, consolidation of data and risk evaluation brings to the forefront automation as a possible solution".



Capt. Tony Fernandes - Learning Facilitator and Risk Management Consultant - enthusiastically explained risk exposure during the carriage of dangerous goods at sea with examples and charts. He discussed details on risk management strategies and difficulties faced by ship-owners.





A technical session saw the audience directly interacting with the speakers. Capt. Harish Khatri, Dy. Nautical Advisor to Government of India advised CMMI to prepare a summary for the difficulties faced by the industry and send that to the authorities.

Capt. L.K Panda, Nautical Advisor, Government of India reviewed various rules concerning the carriage of dangerous goods.

Capt Kaustubh Pradhan, Secretary General, CMMI, proposed a vote of thanks to Capt. Panda, all the speakers, the audience and also to the man behind the conference – Capt. Harjit Singh, CEO of CMMI. “The purpose of the Seminar was to bring stakeholders involved with the

handling of Dangerous Goods under one roof, encourage interaction, understand the issues faced by them, present them to the administration, so that the authorities can frame rules which will bring in ‘ease of business’ in this sector.

“The administration has heard you all and will act on the feedback received, which will make the process of handling of dangerous goods, documentation, transit time etc simpler and easier to follow. Simplified procedures should lead to a healthy growth in this sector. From that point of view, this Seminar has been a thumping success” Capt. Pradhan concluded.

Marex Media



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Under authority of the Directorate General of Shipping (DGS), Govt. of India.

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# Failing is human

## By Finn Skoglund

**A**s Captain or Team Leader – do you always have the full picture of the situation? Since you probably are the most experienced person on board, you know how to do your job. So the obvious answer to the question “yes”. Or is it?

To believe that you are flawless as a leader is both dangerous and wrong. We all make mistakes at some point – no matter how experienced and well-trained we are. It is important for the safety on board that you acknowledge this fact for yourself. It is equally important that your subordinates realize that their Captain/Leader is not free of error.

The fact that even high ranking officers make mistakes should not undermine the authority of the leaders. The leader is still the leader. But this knowledge should be used and shared to remind us that all leaders depend on cooperation and input from their team to be successful.

### A Culture of Heroes?

Why don't people speak up when they should? Does our organizational or professional culture convey that we should get our jobs done without asking too many questions? Are we afraid of losing face in front of our colleagues? Or are we afraid of making our colleagues embarrassed by pointing out something they should have seen for themselves?

We are all professionals; we are all trained to do our jobs according to rules and procedures, we have earned our certificates of competence, and we are experienced seafarers. Despite all our knowledge, we can't prevent ourselves from making mistakes. We are merely humans. Making mistakes is the “downside” of having a brain.

Not long ago, Blå Mediamentor facilitated simulation training in Mumbai for one of our clients in the shipping industry. The company hand-picked their best seafarers to meet the challenges in the simulator. Their performance was impeccable during normal sailing. But when we deliberately turned up the “heat” and introducing stress and multiple tasks – combined with a demanding pilot – then we saw two very different outcomes:

Numerous simulator runs showed that the Captains who tried to handle everything by themselves, soon started making serious mistakes. It was just a matter of time. But the Captains who delegated responsibility, encouraged all team members to communicate and gave positive feedback succeeded even when stress was applied.

The conclusion was clear: The leadership style and ability to cooperate as a team had great affect on the bridge teams' ability to deal with risk.

Recognizing that human errors will occur at some time somewhere, we must use our brains and take this factor into consideration. We have to understand the risks involved with the human factors in our operations, and assess how we may stop human errors from turning into accidents.

### A new focus for training

Almost 40 years ago, a KLM jumbo jet crashed into a Pan Am jumbo jet in the fog at Tenerife airport. There were two persons together with the Captain in the KLM cockpit. They both saw that something was wrong, but failed to speak up and stop the Captain from taking-off. The investigation later discovered that



the hierarchy in the cockpit made the leader unapproachable – even if lives were at stake. Straight after the accident, KLM’s management tried to contact their most experienced Captain to have him lead the investigation of the accident. They had no idea that it was him – their no. 1 Captain – who made the decisions which lead to 583 fatalities at Tenerife. Among the victims were the Captain himself and the rest of his cockpit team.

This accident made the aviation industry change their mindset. The image of one superior Captain was replaced by an understanding of how crucial a cooperating team is for safety. The safety focus changed from educating and training individuals to educating and training teams.

Shipping and aviation have many similarities such as the hierarchic structure and procedures when it comes to culture. Later on, the mindset and focus on teamwork from aviation have been successfully introduced to the shipping industry. When adding the Manila Amendments to the STCW code, IMO made team and leadership training mandatory in the certification of seafarers.

## Creating ONE team

Most good trainers have worked with safety training and communication for shipping companies and their success is to a great extent based on the human factor principles in the Maritime Crew Resource Management (MCRM) theory, originally developed by the aviation industry.

Team and leadership training is an effective method for enhancing teamwork, reducing risk and preventing accidents. Instead of focusing on humans as “cause of error”, one should utilize the human performance and make the team “the last and most important safety barrier against incidents and accidents”.

Safety is the leader’s responsibility, but this responsibility is also shared with all members of the team that surrounds him or her. As long as the leader invites an open communication, each team member is responsible for speaking up if something is unclear or seems wrong.

## The shoreside’s responsibility

Good shipping companies need a continuous focus on safety in general and team and leadership training in particular. Safety campaigns will never work if the company lacks a systematic approach and mind-set for safety in daily operations.

Team and leadership training should involve both seafarers and office staff, and focus on cooperation and communication by using real-life examples and dilemmas. Goals need to be set to ensure a continuous learning process and positive change in behavior.

Learning is not a bulletpoint to be crossed off a checklist. We want

to verify that the learning actually changes behavior and things improve. Companies should see team and leadership training both as a training programme and as an investment in quality and efficiency. This means they expect profit from their investment when it comes to cost-efficiency, operational efficiency and vetting results.

More and more shipping companies work proactively with their safety culture. They see that accidents have a bigger effect on the bottom line than the cost of safety training and tools to prevent accidents from occurring. Clients of shipping companies also expect their suppliers to document concrete work in this area to a greater extent than before. Serious companies even have safety programmes and training as criteria when choosing suppliers.

This makes safety training a smart economic investment in addition to an investment in people’s lives and health. Safety is not something we have, it is something the entire organization must work together for creating every day.



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# Captain vs. Master

**W**hat's the difference between a ship's captain and a ship's master? In contemporary usage, not much, but historically, the titles represented quite distinct roles. Captain is more common in modern usage, but master is more historically accurate.

Captain derives ultimately from the Latin term *caput*, meaning "head" and related to other words beginning with *cap* - such as *capital*; *capitaneus*, meaning "chief," and the French word *capitaine*, meaning "leader," are the intermediate forms. Master, originating in the Latin word *magis*, meaning "more," stems from *magister*, which also means "chief" as well as "director" or teacher."

In the Middle-ages, the man in charge of a ship, often but not always the owner, was called the master; this usage stems from imperial Rome. On the high seas, where delay or dissension could lead to destruction and death, the master had absolute authority, hence the title.

However, before the advent of standing navies, civilian ships were often offered or impressed for use in transporting soldiers and their supplies from one place to another. When the captain of a company of soldiers brought the troops aboard for transport, he assumed military command of the ship, determining its

destination and, if the ship engaged in hostilities at sea, directing the battle. In matters of sailing and maneuvering, though, the captain deferred to the master, who of course remained on board. (Before captain became a specific military rank, it designated a leader of roughly up to several hundred soldiers assembled for a specific battle or campaign. Much later, it became an official designation for a standing military unit of a circumscribed similar size.)

As civilian ships were given long-term military roles, this division of responsibilities remained in effect: A captain had overall authority, but the master was responsible for sailing operations. When permanent navies were established, roughly coincident with the establishment of standing armies, captain became a precise military rank in both settings. Master was also codified as the label for a specific posting; the master (sometimes called the sailing master) oversaw navigation and provisioning of the ship under direction of the captain, who by this time was a skilled mariner as well as a military leader.

Army captains and those commanding land-based units were and are not equivalent in rank: The largest ships in the Age of Sail eventually carried a thousand or more crew members, and ships



often operated independently, requiring the captain to exercise great responsibility (and life-or-death authority), whereas an army captain commanded no more than a couple hundred men and was part of a more restrictive chain of command. Therefore, to this day, a navy captain holds a fairly high status in the naval hierarchy, whereas an army captain (or an officer with the equivalent rank in an air force or in the marines) has a comparatively lesser role, though he or she must still demonstrate leadership skills.

Even in the Middle Ages, a captain designated one or more lieutenants to assist him with command, to lead the company if he was absent or incapacitated, or to temporarily take responsibility for part of the unit. (The word lieutenant comes from the French phrase *lieu tenant*, meaning "deputy," from words meaning "place" and "holder.") Later, a ship was assigned one or more lieutenants depending on the size of



the vessel. Meanwhile, master also briefly became a naval military rank below the rank of lieutenant, rather than a position, but it was phased out as naval vessels were increasingly powered by steam rather than sail.

Other words that apply to naval command include commander, from an Old French word meaning "one who commands." (The rank was originally styled "master and commander" to denote the commanding officer of a small vessel who doubled as the master, hence the Patrick O'Brian novel of that title and the related film starring Russell Crowe.) Commodore, the Dutch word derived from this term, came to apply to a captain given temporary command of a group of vessels and later became a specific rank above that of captain. (The similar

term commandant is not a rank; it applies to an officer of any rank who commands a training facility or a prison.)

Admiral, meanwhile, referring to a high-ranking naval officer in command of an entire navy or a fleet or major unit within one or the other, is from the Arabic word *amir*, meaning "military commander" (the source of *emir*, a modern word for an Arab leader) and, like captain, originally pertained to a land-based leader before it was applied to one who leads naval operations.

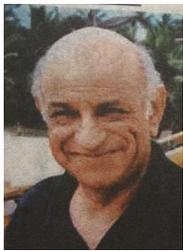
On many modern civilian ships, the person in charge is officially referred to as the captain, whether or not there is a command hierarchy more or less based on naval tradition, though master is also common. In

popular usage, however, captain came to prevail over master, so that, even now, the owner of a small pleasure craft will be referred to as "Captain" or "Skipper"; the latter word is derived from the Dutch word *scipper*, meaning "operator of a ship." Skipper is also used formally to refer to the master of a small vessel such as a tugboat.

Captain is used in other civilian command hierarchies, as in police and fire departments and the like, as well as to refer to the acknowledged leading athlete on a sports team, but master has not been adopted in such contexts from nautical usage.

By Mark Nichol

Credit :  
<http://www.dailywritingtips.com/>



## In Memoriam

**Capt. Bhagwan Dass Kataria**  
**(Born 9/10/1929 – Died 16/1/2017)**

Capt. Kataria (fondly known as Capt. Bill or Billy) joined the TS Dufferin in 1944. While he was cadet there, SS Fort Srikine exploded in the Victoria Dock (known as the Bombay Explosion) killing thousands. During an interview Captain Kataria gave to this writer, he described graphically eye witness account and the help that the cadets of Dufferin rendered during those fateful days. Another memory that he recounted, almost with tears in his eyes, was his family's horrible suffering during the agonizing days of India's partition in 1947. After passing out, he sailed in Scindias. During his stint in the Mercantile Marine Department, Captain Kataria was known to be a strict surveyor, yet a very dignified and a soft spoken person. In MMD, he was asked to and had submitted a report on 'Setu Samudram' project in which he had predicted it's non feasibility. We all can see now that he has been proved correct.

He became a director in Dempo Steamships. Later

he was appointed executive director of Seven Seas Transportation Ltd. on which ships this writer was a master and has experienced Captain Kataria's friendly but efficient management first hand. At the same time he used to be consulted by Singhania's for their new airline project. He was founder and whole time director of BD Kataria Maritime Pvt Ltd. For some time the company owned and operated the 'Magdi Yocoub', a small cargo ship.

Captain Kataria was elected Master of the Company of Master Mariners of India during which tenure he started the practice of monthly lecture meetings. When he was conferred the Lifetime Achievement Award by the National Maritime Day Celebrations Committee, many in shipping industry expressed the view that he really deserved more.

(Submitted by Capt. Milind Paranjpe)



# Friendly Fuel of the future

Shipping industry like any other is concerned with the increasing air pollution levels, to which Annex VI of MARPOL has been enforced, requiring reduced sulphur content levels of marine fuel oils, becoming increasingly stringent, to such an extent that by year 2020, they will be 0.10% for ECA (emission control areas) and 0.5% for all other sea areas. This reduced level of sulphur creates a challenge for ships' engine, because sulphur is a lubricant and also increasing fuel cost.

This is where LNG (Liquefied natural gas), methane (CH<sub>4</sub>) being its main content, comes forth.

LNG is the cleanest burning fossil fuel as it has only one carbon atom. The emissions are very eco-friendly, practically eliminating SOX (oxides of sulphur), PM (particulate matter), greatly reducing NOX (Oxides of nitrogen) by 85%, and also reducing CO<sub>2</sub> emissions by 25%. CO<sub>2</sub> being the worst GHG (greenhouse gas). Hence LNG complies with Marpol, Annex VI, even at year 2020 levels, when Tier 3 engines are mandated to reduce the NOX emissions.

IMO has thus adopted IGF code,

which would be in force for any non-gas tanker using LNG as ship fuel.

Though methane vapour is being used as bunkers in LNG tankers for more than 50 years safely, and that its property, is more safe because LNG vapour (methane) is lighter than air, expansion ratio is 1:600, will quickly dissipate in air if any leak. Even though highly inflammable, no amount of pressure alone can liquify methane, which liquifies at -161.5 degrees at atmospheric pressure.

Also market friendly, with LNG prices touching historic lows, supplies increasing, our mother earth holds estimated reserves for 300 years whereas only for about 50 years for liquid oil.

Units of measurements for LNG are mmbtu, so 1 M3 of LNG is about 24 mmbtu.

An idea, what exactly is btu (British Thermal Unit), in simple terms, is energy produced by a single matchstick. So 1 mmbtu = 1 x 106 matchsticks, which will cost just about 10 USD.

Methane burns at 2750 degrees,

hence has maximum heating value for any fossil fuel.

Of course some challenges do remain, but none unsurmountable.

First initial capital cost of installing gas engine on ship will be about 25% more, which should be offset by cheaper LNG bunker price during ship's service. This decision needs to be taken by shipowner now, because any new ships built now will be in service for at least 15 years, much beyond year 2020, the time when stringent emission regulations come into force.

Leading classification societies have already approved gas engines together with associated pipelines and bunker tanks on board vessel on which basis IGF has been adopted in SOLAS, Chapter II.

Different types of bunker tanks where methane is refrigerated (LNG) or compressed (CNG) are designed. Their volume will be more as LNG density is just 0.45 as compared to 0.90 for HFO.

But the engine size will be much smaller, that too with practically no vibrations.



The first objective for LNG bunkering will be SAFETY , for which Risk assessment must be done by the Flag state , for any LNG leaks , fire etc.

Apart from fixed shore bunker tanks , LNG can also be bunkered by barges and LNG trucks .

Europe ( Rotterdam , Gothenburg) has taken lead in this respect where dozens of small ferries are plying . Singapore LNG bunker facility is shortly to be commissioned . Other places like Fremantle, China offers it by LNG trucks .

Even today about 100 large ships are on order like containers , passenger ferries, tugs , even oil/ chemical tankers, and one worlds first Ethane ships has been launched with gas engine.

Some estimates show by year 2030 at least 25% of the worlds fleet will be powered by LNG.

The time has come to realise the importance of preserving our environment , and for the ship owner to seriously consider this ONLY practical option available , natural gas .

Wording by Captain Tushar Kanti Dhingra ,Senior faculty, Applied Research International ,



**Capt. Dhingra has commanded several gas tankers and undertaken Gasco and gas tanker subjects at various levels of competencies at ARI, delhi.**

## The Company of Master Mariners of India

**Activities of CMMI all over the country include (as applicable)**

- Publish Command Journal with Professional Articles every 4 months
- Assist DGS In operating Facilitation Centres at Mumbai Chennai Kochin & Kolkata (Issuing of DCE & WKC for Support level)
- Assist DGS with External Examiners for Masters & Mates oral exams
- Assist DGS In various advisory committees
- Interactive Monthly lecture meetings on professional subjects to gain knowledge and experience
- Organise family gathering once a year
- Organise Seminars at least twice a year
- Conduct Exit Exams through Board of Examination of Seafarers (BES)
- Issue Training and Records Books for B.Sc Nautical Science candidates
- Proposed: Prepare & Distribute ORB part II for Indian Flag vessels
- Proposed: Participate in committee at IMO
- Proposed: Prepare TAR book for Able Seafarer Deck
- Proposed to assist growth of the Inland Waterways Sector, Ports, Risk Assessment, Cargo profiling etc.
- Receive Command Journals free

**What do I get by being a member of CMMI?**

- Get nominated In various committees
- Chance to increase horizons in Maritime spectrum
- Free to attend lecture meetings
- Free to attend seminars
- Subsidised rates for entry in social gathering
- Feel proud to be part of a professional organization
- Have a platform to voice your opinion on professional issues Including announcement of achievements changes in the exam systems address issues with the administration etc
- We need to create a vibrant body of professionals who will then have a say in the development of Competence & Skills in the Nautical side
- We will become the backbone on which Government should rely for professional inputs

**The Company of Master Mariners of India**

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# ‘FORTUNE blesses ‘Michael’ in a high sea rescue operation:

**A**s Misky yacht moves quietly in the early morning of 22nd Dec 2013 in the Atlantic waters, Michael Kunn leans back happily thinking that there’s a time for every purpose under this heaven. His dream being his yacht “Misky” and his thoughts on his new life with his girl friend and her family in Grenada.

Hong Kong registered Cape Size Bulk Carrier m.v. Aqua Fortune, Call sign VRFZ7 IMO number 9037800 departed from the port of Nouadhibou, Mauritania with a cargo for China on 5th December not knowing that they would will be called upon to carry out a Search and Rescue operation during this voyage in the jurisdiction of MRCC Cape Town.



his yacht was not being propelled in the correct direction. He did a quick calculation and came to a conclusion that soon enough the boat would start taking in water as he and his sail boat were left to the mercy of tormenting sea waves and wind conditions that seemed mountainous. The repairs carried out were indeed inadequate at Port Elizabeth for they could not stand the wind and sea conditions and became inoperative and Michael was compelled to send SOS to seek help.

The “Misky” was registered in U.K and had undergone repair work on her sails at Port Elizabeth. The lone yachtsman was quiet satisfied after the repair work and had decided to sail, not realising that soon he and his dream yacht would have to battle against the gale force winds and heavy long swell of the Atlantic Ocean and his endeavour would take a dangerous turn, which would shatter his dream.

The weather conditions where the white coloured, 43 feet yacht was sailing deteriorated in the fore noon of 22nd Dec 2013 and Michael realised that his sails were not dancing to the tune of the winds and his quiet sailing endeavour was to take a dangerous turn due to technical trouble and



On board the Bridge of Aqua Fortune, at 1025 LT the Sat C printer was printing the May Day message as relayed by MRCC Cape Town regarding the intention of the solo yachtsman to abandon his boat on this fateful day of winter solstice. The Officer of the Watch, 3/O Mr B. Adhavan on





reading the message immediately called the Master, Capt Y.S Mathur. Together they calculated the distance off and time to take to the recent position of “Misky”. MRCC Cape Town was kept informed about the developments as they had directed the vessel to proceed for the assistance and rescue work as AQUA FORTUNE was the only ship around the sailing boat position.

Capt. Y.S.Mathur knew that his leadership skills would be put to the test. He summoned all the crew of the Aqua Fortune, on bridge. The time was 1125 LT. He briefed everyone about the situation. The Engine Room was informed and the rescue operation was planned and discussed with special focus on safety of all, considering the choppy sea condition. Rescue preparations commenced immediately. Ladders were rigged and life buoys were trailed using ropes. Nets were rigged on either side. Teamwork in action.

At about 1240 LT, the bridge team of vessel located the yacht, established contact on the VHF and assured the yachtsman that help was on its way. A Line throwing apparatus was fired when the sail boat was about 200 m from vessel. Michael grabbed the line and jumped into the water but to the horror of everyone on board, he let go the line as he was being pulled towards the ladder. Luckily he managed to get hold of a life buoy & the ship staff threw a net on the port quarter of the vessel which he grabbed and wrapped himself in it in such a way that it would not give way. Soon he was picked up on board by hauling the net.

On board he was wrapped in a blanket, taken to the Ships Hospital, where he was checked for bruises and injury. He was in a state of shock but his orientation was well. After a warm drink of Coffee he regained his composure and was

then able to take a hot bath and settle himself into a clean set of clothes, provided by the ship’s staff.

At 1705 hrs LT, Capt. Mathur successfully called off the rescue operation and all parties Owners/Fleet Management and MRCC Cape town were apprised of the success. Sailing vessel ‘MISKEY’ was abandoned in position 30 37 S, 014 25 E in unmanned condition and was a danger to surface navigation. Master requested Cape Town MRCC to send general alert for all vessels in the vicinity about the unmanned and abandoned sailing vessel.

On 24 Dec 2013 at 0530 LT the rescued lone survivor was handed over to MRCC Cape Town authorities at Cape Town OPL in safe and sound health condition along with his passport. We were proud to have saved a human life - the pinnacle of all Human Endeavours.

On board it was surely a great learning experience and the beautiful thing about learning is that nobody can take it away from you.



**Capt. Y.S.Mathur**  
**Master**  
**Aqua Fortune**

Presented with the Gallantry Award at  
the National Maritime Day Celebrations  
2014

# CMMI Moves into the New Office in Mumbai

(By Sriti D Roy of Marex Media. Edited for Command)



**T**he Company of Master Mariners of India (CMMI) recently acquired a new working space and started functioning from its larger office in Mumbai's suburban heart, Andheri East.

In a celebratory function held on 10 December, CMMI opened the gates of its new office to the industry. The new work space, spanning 1500 sq feet area, will cater to the growing needs of the company, a CMMI spokesperson said.



Capt Phillip Mathews, Master, CMMI, proudly stated, "The CMMI team had been working round the clock to make this opening a reality,

and thanks to some great support from our staff and a few shipping companies we have been able to open our doors to everyone,"



Adding to the joy of the occasion, Capt PS Barve who has chaired CMMI as Master for 10 long years in the past, said, "It is wonderful

to see this dream come true. So many people have helped us on this journey. We're very proud of how far CMMI has come, although there's still a long way to go."

The fifth floor office offers a great view of the city and offers plenty of room for expansion. Although considered long overdue, this opening represents an important milestone in the Company's latest developments.



"Our new office marks the next stage in our growth, and we look forward to growing our footprint at an even faster pace from our new base,"

proudly added Capt Harjit Singh, CEO, CMMI.

Gracing the inaugural event was shipping veteran Capt JC Anand, who was very impressed with these developments and initiatives. He commended CMMI for mootng a

federation that will include engineers, naval architects, maritime lawyers, etc. He also invited everyone associated with shipping to come and be a part of this federation and make CMMI so strong that it cannot be left unheard at global forums.

Also seen at the event were shipping dignitaries like Mr SS Hajara, Capt LK Panda, and Capt Shiv Halbe, along with many luminaries of the industry.



"As we are growing together, we step into this new phase of growing opportunities. Expansion of CMMI with this new space

brings with it tremendous excitement and newer challenges," expressed Capt Hiranandani.



The celebration was also attended by two sailing masters who are CMMI members. "CMMI's initiatives, seminars, and

meetings are an eye opener for all seafarers. We benefit a lot from them as they offer the best learning," Capt Shashank Zende. (Sailing Master, BW Maritime)



Capt Cyrus J Bulsara, (Sailing Master, Wallem Ship Management), added, "CMMI has the seafarer's support, and

is their voice at global platforms".

Capt Bulsara has been a CMMI member for over 20 years now.

The event also unveiled an enhanced version of the CMMI website.

Members can log in and access info about CMMI through [cmmi.co.in](http://cmmi.co.in)

*Founded in 1957, CMMI is a professional body representing Master Mariners, with the purpose of developing and promoting the traditions and standards of the Merchant Navy in India. It is the only body of its kind in India with 13 Chapters and close to 3000 Members, providing valuable service to seafarers in India.*



# Mixed Feelings

By Capt. Sudhir Subhedar

(Editor's Note: This article gives a quick insight into the life at sea as written in full form in the book entitled **Ramblings of Sea Life** by **Capt. M.R.Paranjpe**)

**M**R as the author is popularly called in the maritime fraternity has penned down non-fiction travelogue which many would like to do but unfortunately they do not.

I was made curious to read the book I had come across and I am sure that each of us has unique and similar 'ramblings of sea life'. When reading this rather simple book it is best to relax in a couch with a drink and enjoy detailed anecdotes and humour in uniform. Vital information is spread all over the book including that for risk assessment of maritime adventure – called voyage. Chapters on Suez, Panama and Kiel Canal are eye openers and not likely to come by to ordinary tourists.

MR has offcourse put pen to paper to capture over 50 years of merchant marine service capturing time on board the great Indian Mercantile Marine Training Ship Dufferin, established by the British in 1927 in Mumbai post WW-1. The Dufferin boasts of producing great Naval men like Admiral Katari, Samson, Gandhi, Soman and many more. Needless to say that current crop of senior management of world of shipping is dominated by ex Dufferin cadets. MR is ex cadet of 1961- 63 batch before joining Scndia Steam Navigation company, India's first independent shipping company that came about under great resistance of the empire. British wanted more roads and rails and ports but not Indian shipping, which at that time was the Empire's forte.

The author has documented almost chronologically several aspects of sea going life. Starting with Dufferin anchored off Mumbai and how cadets, new to the sea found the going tough, unnatural and confusing, whilst seeing the Mumbai shore line move from one side to the other side, as such not knowing that anchored ship turns around with the tide. Both, The Dufferin anthem and The Dufferin song have been given pride of place and mention that actually did more good to then seafarers than anything else albeit in Government environment. Dufferin was under charge of Capt. Digby Best and Harvey laying tradition over more than 50 years of on board training for cadets from India, Sri Lanka, Malaysia, Burma, Iran, Pakistan, until Dufferin was replaced by the Vizag built ship, TS Rajendra in 1972. Unfortunately the great tradition of Indian Marine Education and training now only lingers on and the decay needs

immediate arresting because demand for Indian seamen is real.

Life at sea is extremely difficult taking elements of weather into account and the author lets us take a peek into life on sailing in the old dhows and to the reforms that have happened since then, leading to the International Convention on Maritime Labour. MV JalUsha a coal fired ship is described as the first ship of MR, travelling from Bombay to Calcutta. That is the most unique experience away from home, away from shore. This phase is broken at least then, by the adage 'sale and see the world' – no more true on modern merchant ship. The Author got to transit Suez Canal quite early in life and many times thereafter, except during times when it was closed due to the middle-east war. Suez Canal is described as the link between the West and East Asia. The canal joins Red sea via Bitter Lake and is a marvel given that ships transit the canal using designated search light!

In good old days merchant ships carried EXIM trade but sailing was more fun and work. Carrying sugar to America, food and spices to places on the way, return with finished goods and goodies like liquor. Sailing to distant places was fun, shore leave was plenty and there was ships' family all the way for 6-12 months at a time unlike today of multi-national crews, short or no port stay and no family to talk of. One even got to see 'Expo' say in NY or Tokyo. One would be lucky to step down the gangway now given the security concerns post 9/11 and Mumbai blast. Author has captured photographs during his shore leave visiting gates of White House, fancy places in New Orleans, Venice etc. Later is fascinating because there is no other place to deserve the saying – see Venice and die. Venice has waterways all the way, romantic gondolas trooping in and out under of historic bridges of Roman days of glory.

Another interesting tale is of then cargo ships built also to carry up to 12 passengers to avoid wrath of passenger ship regulations. There was demand for some passenger transport by sea then. But it was always tricky and of concern for all the wrong reasons including unsocial intercourse and danger of scams and scandals. Books have been written on such cargo cum passenger ships not to mention the great Titanic – truth will never be known. Sailing to Eastern Eu-



rope and Russia has its own problems and its own charm. Former is mainly due to ice and winds making chill factor on duty unbearable especially without accompanying tot. In the days of cold war it was difficult for ships' company to decipher what to expect next. Some were great moments author tells us but some near to jail going.

Sailing ships to Great Lakes given its changing level of water, system of locks to transit, entering St. Lawrence Seaway is vividly described given hand sketch of the lakes right up to modern Detroit. One always got the opportunity to visit the Niagara Falls on the borders of USA and Lake Ontario. Voyage to Great Lakes is followed by another trip to Canada when Sir Winston Churchill died and the ship had to celebrate or observe Indian Republic day as well and in Command was an English man. Dilemma got eventually better of the wisdom when Indian ships in port in Canada were dressed up while others were in mourning. Religion is another thing that is notoriously fixed at sea. Due to severe hardship against forces of nature very few seamen are 'Nastik'; almost all are God fearing and church going. Traditionally crew joins ship complete with Cross, Rosary, Sai Baba notwithstanding ship is launched with bang of Champagne (or Coconut in India).

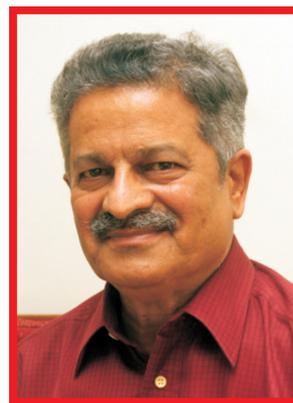
Anxious moments are described in great detail and cannily such as anchor cable running out off Africa slowing ship's speed, feeling of loneliness on receiving first command, sitting at the head of the table in officers' mess with buck always stopping here. Until one gets command one can rely on advice, suggestion, even instructions from superiors, company, authorities, pilots of ports etc. As a Master all that is gone. All good and bad is attributed to the Master in practice and in law. Be it leaky cargo carrying hatches, sweat, ventilation, air conditioning, or over loading to Panama Canal. Later is a civil engineering marvel connecting Pacific and Atlantic Ocean with natural fresh water lake several hundred feet above MSWL. It is quite something to see the two oceans below you when on board transiting ship. The ship in the canal and many a times passes on its other voyages history of marine world such as exile of Napoleon on the Islands of Las Palmas, Malta, Gibraltar, Mandalay, Sicily, Singapore, and Okinawa. Boredom gives way to cheer and moments of pride when raising these land marks after a long sea voyage. Sailors taking to reading habit therefore enjoy the most of the given time.

Like in any other regimental service there is some tit tat with and between executive and engineers. No different at sea. Engineers were called grease monkeys by Masters to their detriment later. But on board Master controls the speed and Chief Engineer is obliged to accept both verbal and written orders. Speed is of utmost importance during ship maneuvering and only Master has the overall progress of the ship's voyage. Master's is the last word. Prospect of

collision or stranding cannot be appreciated by engineers out of sight in the belly of the ship. Exigency could also include sick person or man overboard when of utmost importance is to throw a life buoy (ring) to victim, shout for help, keep sharp look out and keep propellers from sucking the victim. Author had unfortunate incident to recall on a voyage from Basra to Chennai. This is not all; a Master has to contend with Over Time Sheets, Company communication, Charterers flak, Customs officials grunting, arrival departure port, "bakshish", speed money, drunk crews, trade unionism, menace of sea piracy, stowaways, timely disciplinary action et al. There is even the possibility of carrying sensitive cargo like Bofors ammunition and all that entails.

This all comes handy when Master after few years command comes ashore to ship owners' office. Tasks can now range from ship management of few ships to taking over new / old ship anywhere in the world. All the challenging snippets mentioned in the book come handy to ship superintendent but without the command of the Master. This is delicate business.

The book concludes with early 1990 sailing again, to far-away places with little more semblance of modern navigation aids like SATNAV but always first principles drummed into head. Notwithstanding propeller fouling experience calling for good observance of seamanship touristy place of China Straits, Bangkok and Singapore concluding with salute to postal services which before the age of wi fi IT only thing going for seaman was coming of the mail bag and ships currency request by ships' agency. If these did not come life was indeed even more difficult. The book is full of simple details of life on board. I recommend land lubbers to get hold of the book to get a peek into life of merchant shipping officer on whom we depend to feed the global population and keep them warm. Capt. Milind Paranjpe is expecting solutions bubble up from below rather being thrust from above. There are glimpses of collectivism in the book that distinguishes individual traits to get tasks done. I like that, MR often states that he received utmost support from his wife Asha Paranjpe during his writing days.



**Capt. M.R. Paranjpe**  
Author  
Ramblings of Sea Life

# NAUTICAL DEPTH

Capt. Joseph J Alapat

While the word 'depth' could have a lot of different meanings to different people, to a mariner and especially the navigational kind, it has only one meaning.

Next to knowing his position, the most important information he requires is how much water does he have? This has been the same from earliest days to today. What has changed however is how 'depth' has been defined.

Most mariners will not agree to this because, as far as they are concerned, there cannot be any other meaning to the word but the distance measured from the sea bed to the top of the water level.

Water being a fluid, the top of the water level is affected by tides, swell and waves. However the top of the water level was fixed long ago as the chart datum to which tidal heights could be applied. This has been the constant for thousands of years. It is only in the last few decades that we have started playing around with the other end of the depth measurement – the bottom.

Almost all the early ports were built in rivers or other inland waterways and since the wooden sail ships of those times did not require much depths, the inland sheltered locations were just fine. With the growth of world trade and with it, the sizes of ships, many of the old ports found that they did not have adequate depths to cope with the increased draft required by the ships. The first solution was dredging - a satisfactory, albeit expensive solution. As trade continued to grow and increased competition put pressure on the port's costs, of which the largest component was usually dredging, it became clear that other solutions had to be explored.

All the major ports in Western Europe, which are among the largest in the world, are situated on rivers. These ports were the first to feel the need to find new solutions to keep their ports competitive to meet the needs of their industries.

The Governments of these regions turned to the Universities for help and with all the wonderful universities in the region, some of the finest minds were working on the solution. The solution? Well as touched upon in the introduction, was to change the point from which the depth was measured.

All rivers have one common property and that is that their bottoms consist of soft clayish material which is generally brought down from upstream with the flow of the water. This material being transported by the flow is naturally fluid in nature and remains so, as long as there is a flow of water

around and even through the silt. The researchers set about to establish if the properties of this soft bottom would affect the motion of a ship through it.

PIANC defines Nautical Depth as: "the level where physical characteristics of the bottom reach a critical limit beyond which contact with a ship's keel causes either damage or unacceptable effects on controllability and manoeuvrability".

Funded by their Governments, large scale measurements were taken of the bottom profiles of river bed at different locations including sampling different layers of the bottom as well as hydrographic surveys of the bottom with different frequency echo sounders. Once the fluid characteristics of the bottom was studied, different mud samples were used as a standard to recreate inside towing tanks. Various scale models were made of different hull forms of the various types of ships fitted with various sensors inside to measure the forces on the hull. The towing tanks were filled with mud of the similar characteristics as the actual mud samples and then the various scale models were towed in these tanks by an overhead gantry moving the models at a steady speed with the hulls sunk into the mud layer at the bottom. All the while the sensors fitted inside the hull measured all the forces on the hull. These experiments had to be conducted with different mud conditions, hull forms and different layers of penetration of the hull. To standardise the tests, generally set number of mud conditions would be tested on a set number of different hull forms using different levels of penetration into the mud layer. Say +10%, 0, -4%, -8% & -12% of the draft under keel clearance. These results could be correlated to mud conditions which were different than the ones tested.

All the measurements of these experiments were then recorded and analysed and made into a mathematical model which they incorporated into a ship simulator. This simulator was just like any other ship simulator which many of us may have done, except that it had one additional factor programmed into it, which was the pressures on the hull due to the different levels of penetration in different types of mud types.

The final validation of the study, was to have Pilots from the ports carry out the various manoeuvres on the simulator at different levels of penetration of the hull into the mud and asked to determine the effect on the ship movement and ascertain if it was acceptable or not. So in some cases we could have a fine hulled vessel with 12% of her draft immersed in a certain mud type to be rated as acceptable





Towing tank with a scale model to be towed by the overhead gantry.



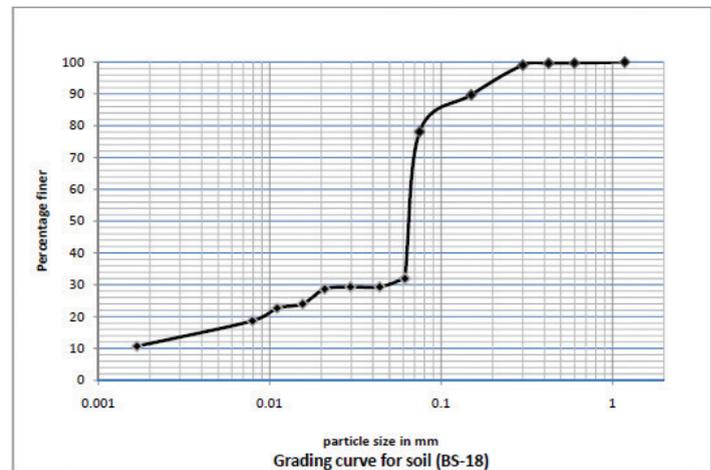
Scale models of different hull forms (L) and ship manoeuvring simulator with mud inputs (R)

by the Pilots but a full form hull behave very differently in the same mud type with the hull immersed to 8% of the draft into the mud. On the completion of all the simulations a final decision would be taken to establish the safe amount of penetration of the hull for that port as also the density of the mud level that is 'navigable'. Needless to say, the most conservative levels are then taken to be the levels established for that port.

While all of the above is fine from a theoretical viewpoint, the same has to be made into a solution practical enough for the ports to be able to implement. This was a challenge, as ports have to maintain a declared draft / depth to enable ships to be able to navigate through, and its measurement should be as easy as the existing echo sounding method. While 210 kHz is the standard frequency for marine echosounders, dual frequency echo sounders generally used for surveys have 33 kHz in addition to 210 kHz. The higher frequency measures the top layer of the bottom, the lower frequency has greater penetration and hence measures

a layer below the top layer, the penetration depending on the condition of the bottom. In areas of hard bottom, both frequencies will give the same reading. So of all the different characteristics of the mud layers such as viscosity, yield strength, density etc. it was found that the easiest characteristic to measure was density. Hence it was decided that the way to translate all the research studies onto the field was to convert the various mud conditions that was found to be acceptable for ship manoeuvring to the density of the mud level through which the keel is passing. So the level from which the depth was to be measured had to be translated into the level at which the mud layer of that density existed. Thus say, if studies had established that a mud layer of 1.20 Tons / m<sup>3</sup> (for example) was the safe layer though which the vessel could be navigated, then the measurements of depths would be from that layer and not the top layer which was the interface between water and mud.

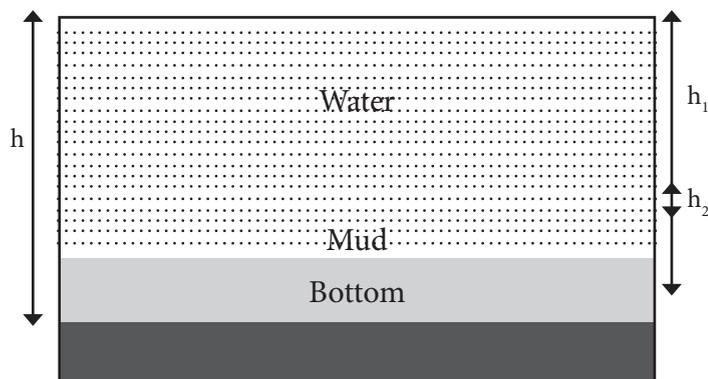
Now that a base had been established for measurement of



Bed sampling with a 'Van Veen' grab (L) and lab analysis for grain size distribution (R)

depths, there are other governing factors which may limit the full use of the soft muddy layers for navigation. At no time must the penetration of the hull exceed the amount established by simulations which was 12% of the draft. The other limiting factor was obviously the 10% UKC from the layer.

With the draft of the vessel being 'D':



$$\text{UKC top mud (penetration)} = \frac{h_1 - D}{D} \quad \text{Max} = -12$$

$$\text{UKC bottom mud (clearance)} = \frac{h - D}{D} \quad \text{Min} = 10$$

If 8% penetration was found to be the maximum permissible from the simulations, then that was the governing factor in establishing the depth and in case 8% penetration reduced UKC to less than 10%, then the 10% UKC from the layer would be the governing factor for establishing depth. The reason for limiting the sinkage to 12% of the draft is because the towing tank experiments did not have the resources to test greater than 12% penetration.

Measuring density of the mud layers is another challenge and this is achieved with the use of a special echo sounder which operates on a lower frequency - 24 kHz being the most common. This is used much as a regular single beam echo sounder. Along with this, at certain points, a density measurement instrument is lowered to the bottom.

There are many different models available in the market and the one shown here is manufactured by Stema in the Netherlands and called the Densi Tune. It essentially consists of a tuning fork which is lowered into the muddy bottom and as it goes down the variations in the tuning fork frequency is translated into density and yield strength measurements. The physics behind this, being too complex for a mariner to comprehend, is not even attempted.

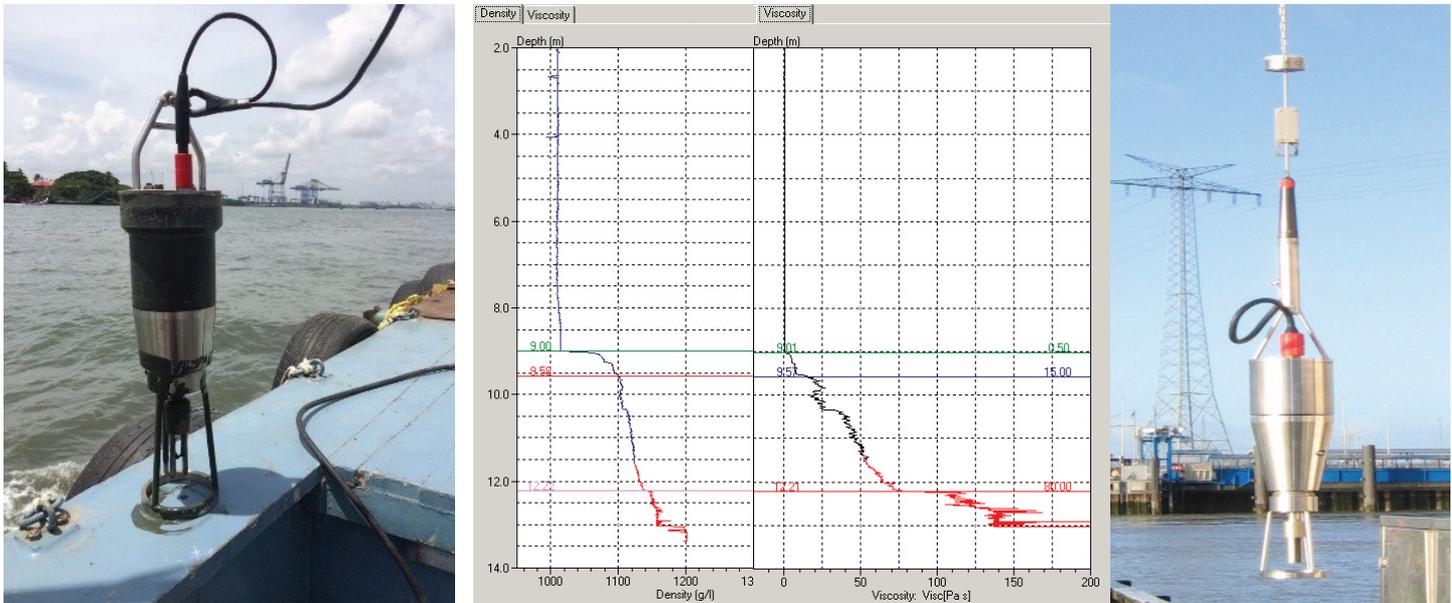
A software package is then used, in this case it is Silas by Stema, which then correlates the echo sounder readings into density measurements and gives the depths of the layer of the chosen density. The Densi Tune measurements are done only occasionally to calibrate and correlate the echo sounder readings, at other times only the 24 kHz echo sounder is used for surveys and the readings are processed using the software to give density measurements. The discussion on whether density is the best measure of the nautical bottom will continue until the cows come home, but the fact remains is that none of the other characteristics can be measured as easily as density.

So essentially, by lowering the bottom level from which we measure depths, ports are able to make huge savings in their dredging costs while still being able to handle ships at that draft. For a channel about 10 nautical miles long and say 280m wide a 1m saving in dredging translates into 5.2 million cubic meters of mud which translates into a saving of about 6.2 million cubic meters of maintenance dredging saved which conservatively translates into about 62 Crores of Rupees in annual dredging costs. Now you can see why this new definition of 'depth' starts looking very attractive to the ports.

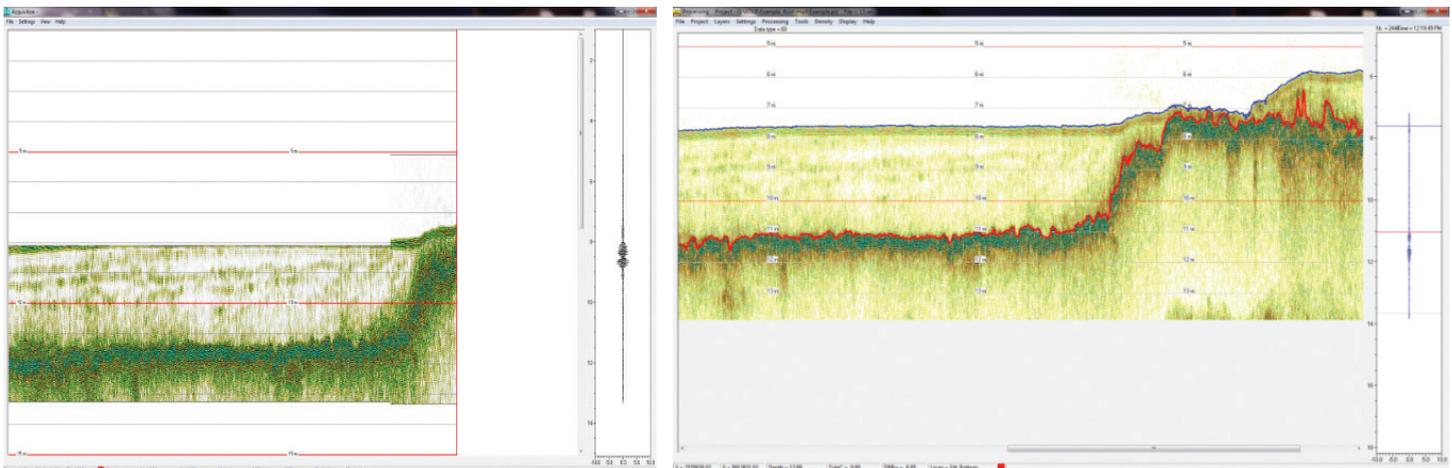
Apart from the towing tank experiments, in Belgium they have even undertaken full scale models by first dredging a basin to a certain depth then deploying dredgers to go through that basin at various levels of sinkage and monitoring the behaviour of the dredger to determine acceptable levels.

Some of the ports that have used or continue to use





The Densi Tune (L) and the reading of density & viscosity against depth (R)



Silas acquisition raw data (L) and same data after processing by Silas software (R)

Nautical Depth around the world include Rotterdam, Zeebrugge, Nantes, Paramaribo, Bangkok and Cayenne among others.

At the end of the day, what does this mean to a mariner? Well very little really, as the mariner is asked to arrive port at a certain draft SW/FW/DW. On arrival at the declared draft there is no way for the mariner to establish if the channel has enough 'depth' to safely berth his ship. While company manuals will state the established UKC policy of the vessel operator, the Master has no way of determining if the UKC is available or not apart from declaring his draft to Agents, Port Control and the Pilot.

In conclusion, all that can be stated with any certainty is that no port wants its operations shut down with a ship grounded in its approach channel. There is no greater nightmare for a port. So even while forced by commercial considerations, no port can afford to risk its continued existence on untried or untested methods. Ports will

establish levels and practices which best serves their interests and when the Port's interest is safeguarded it follows that the ship's interests are too.

The only (if any) loser in the adoption of this concept, is possibly the Chief Engineer and his team, who after F.W.E. may wonder how come his sea-suctions are full of (soft) mud.

With them, lie all our sympathies.



The author is the Harbour Master of Cochin Port and the views expressed above are his own.

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# Tech-Savvy, Adaptable Seafarers Needed

By Captain Pradeep Chawla, Managing Director,  
QHSE & Training, Anglo-Eastern Ship Management

The last two decades have been extremely fast paced with respect to technology influencing every walk of life. Internet, Google, Facebook, LinkedIn, WhatsApp including smartphones and their effects on the way we communicate, interact and learn are well-known.

The maritime industry has also made great strides in the use of technology, and the daily life on board ship has changed significantly from what it was in the 1980s and 1990s.

Here is a quick review of some of the changes that have taken place already or are coming in the next decade or two and my opinion on the challenges associated with them.

**ECDIS** is a revolutionary change, and there is no doubt that it has improved safety of navigation. The full benefits of ECDIS will be realized as e-navigation strategies evolve.

The discussions of type specific familiarization for ECDIS have made it obvious that non-standardized interfaces present a challenge in the processing of information by the navigator, and this is an aspect that needs to be carefully analyzed and addressed as we move forward with e-navigation.

**Electronic engines** controlled through advanced computer systems bring about similar issues for the engineers. However, presently, with the market domination of only

two brands, this has not led to the issues experienced with ECDIS. Nevertheless, the issue of processing, analyzing and controlling data from a single screen is a dramatic change from touching, feeling and listening to the machinery.

**Position fixing with GPS**, combined with ECDIS with radar overlays, has revolutionized the bridge watch-keeping practices. Over-reliability on GPS is a constant discussion amongst older navigators and the younger ones who have never witnessed a GPS failure. The younger navigators question the practices of manual / radar fixes when they seem to be obtaining continuous accurate positions from three or four GPS sets on board. The debate on the concept of “cross-checking” a vessel’s position is taking a whole new meaning with the advent of combined GPS/ GLONASS receivers coupled with other satellite positioning systems on the horizon.

**E-Navigation**, as presently envisaged by IMO, is a dynamic target and the evolution brings about various challenges of collection, integration and analysis of data. The way mariners will interact with e-navigation presents a number of challenges that need to be carefully studied and risk assessed as new equipment and systems are designed and developed. Alarm management will be a critical feature here.



**Others:** Besides the social media byproducts of the internet that have become an integral part of our lives, the introduction of **cheaper communication** has resulted in increased volume of data exchange being handled by vessels. There are additional tasks to manage the various software issues. The increased use of electronics has come with the problem of frequent hardware related breakdowns. There are several cases of Radar, ECDIS and other electronic equipment breaking down, thereby putting extra stress and workload on the mariners who have to wait till a suitable port for repairs.

There is a need for standardization and having strict equipment quality monitoring standards at manufacturing and installation stages so that they are better able to withstand marine conditions and have better “mean time between failures.” The time spent on handling the increased enquiries and requests from people ashore is a significant factor that brings about challenges in designing onboard tasks and responsibilities to prevent any neglect of the core tasks of navigation and care of the cargo.

**Environmental regulations** are evolving and developing rapidly. Regulations for measurement of harmful gases are inked. Ballast



water treatment plants are being fitted. Emission regulations are being rapidly tightened. The shipping industry is under environmental pressure from the world's citizens, and efforts to educate seafarers in their role in this are urgent and important.

**The Maritime Labour Convention (MLC)**, which was a much needed legislation for rights of seafarers, has focused the attention of companies and port states on the issue of rest hours. However, it has not yet focused the attention of the port states and regulations on the cascading effects on safety of navigation, especially in areas of long pilotages. The effects on traditional expectations of a master's presence on the bridge and the laws about the responsibilities of the pilots have not been sufficiently deliberated over prior to the entering into force of the MLC. This brings about testing times for the mariners, who often are the scapegoats of regulatory decisions when things go wrong. The fundamental issue is the manning scales on board, and regulators find it impossible to get consensus between various countries.

**The traditional hierarchy on board** and the management style of "My Ship, My Law" has become obsolete in modern days. Whistle blowing, MLC complaint procedures and transparent systems have brought about a change in the way masters and companies manage their workforce.

**The amalgamation of ship and shore systems** is inevitable and an inherent part of E-Navigation. However, it opens up fresher challenges of cyber-security. The possibilities of terrorists taking over a ship remotely are

being speculated. Mariners will soon need to understand and appreciate the dangers associated with cyber hacking.

**Big data** is becoming the buzz word in all industries. The maritime industry is a traditional industry and usually not the first to adopt the latest technologies. The advantages of business intelligence through the use of big data are enormous, and it would be good if the industry does not delay investing in this new field.

Besides the areas discussed above, the mariners are also faced with changes being brought about by increasing number of regulations:

SOLAS 74 was 158 pages. SOLAS today is 294 pages.  
Marpol 78 was 265 pages. Marpol today is 447 pages.  
STCW 78 was 243 pages. STCW 2010 is 356 pages.  
And we of course have the Maritime Labour Convention (110 pages).  
Ballast Water Convention (38 pages).  
Anti Fouling Convention (45 pages).  
This is without counting regional regulations like OP90, Vessel Response Plans, SOPEP  
etc etc. A rough estimate is that a master needs to be familiar with at least 4,500 pages including the company's SMS and owner's and charterer's instructions.

So what competencies should our future super-mariners need? In my opinion the most critical human factor competencies that are needed in the future are:

### **1. The ability to process large amounts of data from various man-machine interfaces:**

Standardized and well thought out user interfaces will be a critical part

in the design of future shipboard equipment. Insufficient research or attention to this could endanger the progress of adoption of new equipment and systems. Accident case studies show that the majority of situational awareness errors are due to a failure to monitor or observe data from various pieces of equipment due to either overload of information or distractions.

### **2. The ability to focus on critical issues:**

Overload of information can cause the danger of missing out on the critical issues. This issue is already being experienced on the modern day bridge. The plethora of alarms and displays sometimes distracts the navigator from keeping a proper lookout by sight and other available means.

### **3. The ability to work with remote teams:**

Teamwork on board is well understood at sea. However, with the closer integration of ship and shore systems, a large number of tasks will be done by people ashore. Vessel traffic services will have a larger role to play. Teams ashore will analyze engine data and advise the shipboard teams. The large mix of shipboard crew nationalities and multi-national shore teams will bring about new challenges in communications and teamwork.

### **4. The ability to be assertive:**

Interaction with a larger number of shore based teams will require a clear emphasis on a Master's Overriding Authority enshrined in the ISM code. With the lower costs of communications and e-mail systems, masters are already reporting a feeling of being controlled too

closely by shore staff. While the laws make the master responsible for all accidents, the reality is that masters feel that their authority with respect to day to day running of the vessel is being taken away.

#### **5. The ability to understand the limitations and recognize changes of automation:**

Significant improvements are expected in automation of shipboard systems. Other industries have recognized that automation leads to complacency, thereby resulting in slower response in case of emergencies related to failure of automation. Other industries already talk of “Automation Complacency” and “Automation Traps.”

#### **6. The ability to manage change:**

The pace of change of technology and regulations in all industries has never been faster. We see the challenges in adopting change in our daily lives. Instagram and Snapchat are not needed by people in their 50s. However, for a teenager they are basic necessities of daily life. A significant number of seafarers and managers ashore are experiencing challenges with adapting to ECDIS or accepting the inevitable irrelevance of celestial navigation to a young officer.

#### **7. The ability to learn continuously:**

The human race is discovering new knowledge faster than ever before. It is no longer possible for any professional to be considered competent without constantly keeping abreast and subsequently adapting to these changes.

#### **8. The ability to cope with increased stress:**

The shorter turnaround in ports,

faster speeds of transit, larger size of vessels, stricter financial constraints, extremely low manning levels, criminalization of seafarers and various other factors have changed life on board to a high-stress job.

Social media is a wonderful way of keeping touch with the family, but it also has an effect on rest hours and it brings the problems of the family closer on board. The high stress levels amongst seafarers and the effects on their health is not being fully recognized and appreciated by regulators and industry leaders. A lot more research is needed on the topic of stress affecting seafarers.

#### **9. The ability to communicate effectively:**

The ship-shore and ship-port interface is becoming more complex due to various factors like port security (without the port taking any moral or financial responsibility for a stowaway boarding a vessel), terminal regulations and increased pressure on profits in all parts of the industry. The role of the master to effectively deal with charterers, terminals, port state officials, oil major inspectors and the multitude of agencies that now come on board the ship has become more critical than ever before.

#### **10. The ability to be a leader:**

In addition to the master and chief engineer of the future retaining their traditional skills of managing their shipboard teams, they will also need to learn and adapt to various new skills of organizing, motivating, negotiating, running meetings, public relations and time management. The seafarer of the future will need to be a tech-savvy, adaptable, analytical and rational manager who will be able to do a lot more with better

technology and shore-based support. Or perhaps, he will be sitting ashore monitoring drone ships!

Various companies are already tackling these issues through their recruitment and training programs. Psychometric testing in some form has been adopted by many companies to try and identify the behavioral competencies needed for the future mariner.

Training requirements can only keep on increasing with increased regulations. Blended learning, outcome-based education and on the job training will take on a greater significance in the future.

Our industry, like others, is going through a transition and debate continues between the believers in the traditional good old ways and the futurists who are looking at technology and modern human performance management theories to get ready for the future. But, there is no doubt that focusing on human factor competencies is critical for progress in our industry.

The maritime industry has only recently started looking at human factor competencies. One of the most significant amendments of the Manila Convention (STCW 2010) was to incorporate competencies for leadership, teamwork and managerial skills. Even the name of the IMO’s sub-committee on “Standards of Training and Watch-keeping (STW) changed to “Human Element, Training and Watch-keeping (HTW)” in 2014.

Source: [maritime-executive.com](http://maritime-executive.com)



# Somali Pirates Attack First Ship in Two and a Half Years

*Credit gCaptain, founded by John Konrad in 2008. (gCaptain is dedicated to building an interactive community of maritime professionals)*

*Through the use of social media tools gCaptain promotes user interaction, discussion and the sharing of both ideas and information. By bridging the communication gap between print and the end reader gCaptain fosters ideas that improve safety and increase efficiency aboard ships globally.*

ESPS Victoria patrols off Somali as part of the counter-piracy operation EU NAVFOR (Somali) in Oct. 2015. Photo: EU NAVFOR

Somali pirates launched their first attack on a merchant vessel in more than two and a half years, the European Union's counter piracy operation Naval Force Somalia (EU NAVFOR) confirmed.

The attack occurred on Oct 22nd when a group of six armed pirates in a skiff chased and fired upon the UK-flagged chemical tanker CPO Korea approximately 330 nautical miles off the east coast of Somali.

EU NAVFOR confirmed the attack after a thorough investigation into the incident.

"During the attack a number of shots were exchanged between the six armed men, who were in a fast-moving skiff, and the armed security team on board CPO Korea," EU NAVFOR said in a statement. "The suspected pirates eventually broke away after CPO Korea's crew successfully implemented self-protection measures by increasing speed, altering course and rigging fire hoses to thwart the attack. CPO Korea was able to continue her transit in the Indian Ocean, with no casualties reported."



This is the first reported attack on a merchant vessel off the coast of Somalia since early 2014. It comes after 26 hostages from fishing vessel, Naham 3, were released Oct 22nd after being held by Somali pirates for four and a half years.

Pirate attacks in the Gulf of Aden and Indian Ocean surged in 2008 and by January 2011 over 700 hostages and 30 vessels were being held by Somali pirates, according to EU NAVFOR. In recent years however piracy activity in the region has fallen to close to zero due to counter piracy naval patrols, shipboard security teams, and other self-protection measures implemented by the shipping industry.

Currently there are no vessels and sailors still being held captive. Nevertheless, the threat of piracy in the region remains a concern. EU Naval Force (Somalia), Major General Rob Magowan CBE, has reiterated the need for continued vigilance at sea after this latest attack.

"This attack shows that pirates still have the intent to attack ships for ransom and cause misery to seafarers and their families," says Major General Magowan. "It is imperative that the international community remains vigilant. The EU Naval Force is working with counter-piracy partners to coordinate efforts to ensure pirates do not once again terrorise the waters off the Somali coast."

The counter-piracy military operation EU NAVFOR Somalia, also known as Operation Atlanta, has been active off the Horn of Africa and in the Western Indian Ocean since 2008 and had a mandate for operation till December 2016.

"Despite the decreasing number of attacks in the region the imminent risk of Somalian piracy still exists and needs to be addressed accordingly by owners and charterers alike."

# ‘Nautineers’ come together at Pre-Diwali bash

by - Sriti D Roy of Marex Media

[Navi Mumbai, October 15]



‘Nautineers’ – both Navigators and Engineers- of Navi Mumbai came together to celebrate a Pre-Diwali bash with their families and peers at an appropriately Indian ambience at “The Village Restaurant” in Vashi. The traditional dress code and rural theme of the restaurant complimented the customary Diwali celebration that had been organised by CMMI & IMEI members of Navi Mumbai.

The event was termed ‘The Nautineers Get-together’; the festivities were attended by Seafarers with great zeal, merriment and energy. Gracing the event in their traditional best were Captains and Engineers and their families, who attended the gala night in great numbers. The kids, in particular, enjoyed the bash with gusto.

Adding colour to the event was the felicitation of Capt Harish Khatri, Ex-Dy Nautical Advisor, Directorate General of Shipping, who was being honoured for his remarkable contributions to the industry.

Joining him at the felicitation was his wife Mrs Lata Khatri. Capt Ajay Achuthan and Mr P Kirolikar presented a bouquet to Mrs and Capt Khatri.

“His work towards MLC and seafarer welfare has been remarkable,” said Capt Achuthan while praising Capt Khatri, now the first Nautical Advisor to the Maharashtra Maritime Board.

Starting 2016, The CMMI Navi Mumbai group organised a get-together at Holi and now at Diwali. Apparently they plan to continue with this twice a year during Diwali and Holi, to meet and greet their



peers with family. Diwali – the traditional festival of lights- has been celebrated in India since





celebrated amidst the super gathering. The eldest member of the evening was Capt Eshwar's mother. The youngest member was 2 year old daughter of Capt Sanjay Kandhway. Capt Nawin Khaware, who drove all the way from Kandilvali was the family attending from the farthest location.

time immemorial. This celebration was aimed at getting seafarers together under one roof amidst busy schedules for some fun and frolic.

"Such celebrations make our bonds stronger. CMMI is a part of our extended family and these celebrations are a perfect time to meet, greet and make the festival enjoyable. This tradition of celebrating with both Nautical and Engineers under the same roof makes it even more special," said Mrs Namrata Noelle, wife of Capt Gyanendra Singh, Managing Partner at 'Abaca Research and Consultancy Services', and the prime mover behind this grand event. Capt Singh coined the term 'Nautineers'.

The celebration was a great success with more than 150 attendees, over 65 Masters and Engineer Officers and their families from across Mumbai. Kids were seen dancing to their hearts' content, spouses of CMMI members cavorted with special festive spirit.

Among the splendid

guest list, the evening was graced by Capt SP Rao, Capt S Baijal, Capt Mohanty, Capt SK Singhal, Capt GC Sekhar, Capt Ashok Bhattacharjee, Capt Vijay Kumar, Capt Hemant Mishra, Capt Ranjan Mishra, Capt BP Singh, Capt RS Gautam, Capt Sandeep Sharma, Capt Pawan Gupta, Capt Pankaj Mehrotra, Capt Ajay Kumar, Capt Pankaj Sengar, Capt Ravi Prakash, Mr Raja Hadikyal, Mr Anil Jain, Mr SK Jaiswal and their gorgeous better halves.

The evening was also attended by Capt Sahu and Capt Dheeraj's wife and children as the husbands were away on official duty. The evening was extraordinary for Mrs Malini, wife of Capt Eshwar Visweswaran, VP IOT, whose birthday was

The food spread was such that it catered to all tastes from Pasta and Chinese to 'Gol-gappe', 'Chaat' and Dosa counters. Lip-smacking starters like Corn - Cheese balls, Herb-Fish fingers and Chicken wings, and a wide spread of main courses too. The un-ending dance session of ladies, couples and children was thoroughly enjoyed by all. There were couple games and games for children and lots of spontaneous prizes. The children were delighted to get a return gift too, which was carefully chosen to be an 'Indian product'.

Overall, it was an evening that will be remembered and cherished for a long long time.





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