

COMMITTED TO A SUSTAINABLE FUTURE



EXPERT SPEAK

CAN THE BATTLE AGAINST
CORRUPTION BE WON?

Page 16

CSR

"FROM JHARKHAND
WITH LOVE"

Page 30

OUR PEOPLE

IMO 2020:
THE BIG SHAKE-UP

Page 33

Table of Contents



- 02 MESSAGE FROM THE CEO
- 04 "WORKPLACE SAFETY AND HEALTH" PARADOX

AWARDS & RECOGNITION

- 06 TOP AWARD FOR SYNERGY GROUP
- 08 GLOBAL RECOGNITION FOR SYNERGY GROUP

IN FOCUS

- 10 SYNERGY GROUP AND NORDEN AGREE SHIP MANAGEMENT DEAL
- 11 "GETTING TO ZERO COALITION" LAUNCHED WITH SYNERGY GROUP AS A MEMBER
- 12 TEAM "PACIFIC ENDEAVOR" PRESERVES THE INTEGRITY OF GLOBAL SAR SERVICES
- 13 TEAM "CAP SAN TAINARO" BREAKS RECORD FOR PRODUCTIVITY
- 14 CLASS NK APPROVES ALPHA ORI'S SMARTSHIP PLATFORM

EXPERT SPEAK

- 16 CAN THE BATTLE AGAINST CORRUPTION BE WON?
- 18 LUBRICATION MATTERS #4 EFFECTS OF WATER ON LUBRICATION

EVENTS

- 20 CAPT. UNNI AT THE HONG KONG MARITIME WEEK 2019
- 21 CAPT. UNNI AT THE GLOBAL MARITIME FORUM
- 22 CAPT. NALWA JOINS IMU ADVISORY BOARD
- 22 ENMORE OIL TANKER SHIPPING SUMMIT
- 23 OMC SHIPPING'S 9th ANNIVERSARY CELEBRATED IN STYLE
- 24 SYNERGY CALLS FOR ACTION ON MENTAL HEALTH AWARENESS
- 26 CELEBRATION OF A TIME-HONOURED TRADITION

INTERVIEW

- 28 CAPT. INGUVA V S SASTRY - LIVES SAVED, RIGHTS PROTECTED!

CSR

- 29 DIVERSITY AN INCLUSION - A BELIEF AT SYNERGY
- 30 "FROM JHARKHAND WITH LOVE"

OUR PEOPLE

- 32 ARTIFICIAL INTELLIGENCE OR EMOTIONAL INTELLIGENCE?
- 33 IMO 2020 : THE BIG SHAKE-UP
- 36 CAPT. MADHU REPRESENTS SYNERGY AT SWEDEN'S LINNÆUS UNIVERSITY
- 37 PROUD TO BE A SYNERGIAN
- 40 CHENNAI EMS TEAM INTRODUCTION
- 42 MY RENDEZVOUS WITH "FAIRCHEM VICTORY"
- 44 PROMOTIONS LIST
- 45 WHY GREEN ?

I am delighted to announce that Synergy is one of the founding members of the “Getting to Zero Coalition”, which was launched last September. This is a partnership between the Global Maritime Forum, the Friends of Ocean Action and the World Economic Forum and a powerful alliance of some 85 public and private sector organisations within the maritime, energy, infrastructure and finance sectors.

At Synergy, we started charting a course to a greener future for shipping, long before the approaching IMO 2020 deadline added some much needed sense of urgency to it.

I am excited to announce that our special projects team, which had some concrete and entirely workable proposals, is working steadfastly on several innovative design concepts.

But the fact is that zero-carbon fuels and vessels are not yet a reality and competitiveness with fossil-fueled ships, is still far from proven.

We must continually improve the efficiency of our operations and develop precompetitive ways of collaborating in order to reduce waste and resource use and stimulate global trade to the benefit of the maritime industry and the world it serves.

This profound transformation needs to be undertaken NOW. Significant progress must be made in the next ten years. Innovation in respect of climate change is part of any modern and responsible company's duty. We owe it to ourselves and we certainly owe it to those who will come after us - it has rightly been said that we do not inherit the earth from our ancestors but borrow it from our children.

Be safe and blessed,
Capt. Rajesh Unni

Message from the CEO

Capt. Rajesh Unni

Dear Colleagues,

What do the floods that ravaged northern India, the recent typhoon in China, Hurricane Dorian, Typhoon Hagibis and the recent devastating Californian wildfires and Australian bushfires, have in common? The answer is : they are all examples of extreme weather fueled by climate change.

Unless there is some very serious shift, our weather will become ever more extreme and people worldwide will pay the price for lasting climate change, thus becoming the first generation to feel its impact and the last which could have reversed it.

Shipping made a breakthrough at the IMO in April 2018, when governments agreed on an ambitious plan – to at least halve the industry's greenhouse gas emissions by 2050.

“I am delighted to announce that Synergy is one of the founding members of the **Getting to Zero Coalition**, which was launched last September.”

Safety First : Thoughts from the frontline

Occupational safety includes all aspects of people's physical, mental and social health and safety on board Synergy's ships. It is the umbrella of our efforts to prevent injuries and mitigate risks in day-to-day shipboard operations. Working on board ships presents several kinds of hazards for seafarers, and the spectrum of risks ranges from severe and immediate dangers to lesser, but still significant, issues.

Safety is at the core of our unique culture at Synergy. We cannot manage with the notion of safety just championed by wall posters - instead it must be woven into the very fabric of our lives. This idea perfectly encapsulates the theme behind our 'Workplace Health and Safety' writing contest, for which we received many very individual and highly original entries from the coalface of occupational safety and wellbeing, and our frontline and most valued onboard assets - the crew.

Here, then, is the second part in our Foghorn series 'Safety First – thoughts from the frontline' featuring the thoughts of Mr Remy Salaya, oiler ex BW Hazel.

The Workplace Safety and Health Paradox?

Safety on board is a very important attribute of the running, managing and crewing of a vessel. Inevitably, work conditions pose risks and dangers with potentially fatal consequences for the crew and serious harm to property and the environment - unless care is taken - and ensuring the safety and health of the ship's staff is the responsibility of all involved, both on board and ashore.

Falling short on safety is not an option, and setting safety standards is central at Synergy, because, and I quote:

"Our core values are deeply held beliefs and are the seeds of our organisational culture. They serve as a compass for our actions and describe how we behave both individually and collectively. Our anagram for the core values, i-STEER, helps to embed the core values into each individual in our organisation." This is where proper applied training comes in. Being trained in safety properly and therefore applying it instinctively can drastically reduce the number and severity of risks and accidents, making a ship a lot safer.

Here are a few tips and pointers as regards the safety and health of ship staff.

1. Apply proper training – knowledge saves lives while ignorance can mean incidents.

Proper, meaningful, applied and absorbed training is vital. What is the purpose of safety and health training, with webcasts, DVDs, toolbox meetings, risk assessments and safety meetings, if it is only watched and listened to and applied in the four corners of a training room, or is just another printed document routinely filled or given out? The key here is to make safety a basic instinct - on a collective, and not just an individual basis - rather than have just rote and often random application of instructions.

Nobody is more responsible for safety on board than the ship staff themselves, but this does not necessarily mean there will be no accidents. They are human, and, as inevitably as holes in Swiss cheese, they can make mistakes. Putting things at their simplest, one always just goes back to the basics of initial safety and health training and familiarisation, the terms of work permits, proper housekeeping, the PPE matrix and risk assessments, remembering always to think before acting, never hesitate to ask and never take shortcuts, for safety lies in doing things properly.

2. Safety Officer and representatives – someone looking outside of the box.

Many jobs on a ship are routine and repetitive, which inevitably triggers complacency and boredom, eventually prompting people to seek shortcuts and meaning that proper (and very likely also mandatory) safety procedures are neglected. So safety procedures are best overseen by staff who have been trained accordingly and have designated responsibility.

Such individuals serve as a guide, reminding all of proper procedures and identifying risk. They have a clearer picture from, so to speak, outside the box, and serve as a mirror that reflects what others sometimes cannot see. This approach is applied on all Synergy Vessels, and helps in preventing many accidents, and experience-based identification of near misses and root causes further contributes greatly to safety and health on board.

3. Safety comes first – measures must be taken so safety is foremost.

Suitable measures and preventive steps should always

be taken to ensure safety on board. These will include protective structures like railings, barriers and handrails and machinery and power tool guards, as well as precautionary signs and symbols, with everyday tools and other equipment being well maintained and in proper working order.

All such things are essential and should never be taken lightly, and likewise as regards opening hatch covers and manholes, scaling via access ladders or merely closing cabin doors. Crew will have to operate all over, including confined spaces, cargo holds, masts, weather decks, tank tops, bilges, scavenge spaces, tanks and many more places. Such a varied workplace itself presents risks, with many places where there is no room for error and a slight mistake could prove fatal. Everything should be in its proper place and leaving anything neglected or otherwise unattended is simply asking for trouble. All necessary risk assessments should be done before starting work, and plainly there should be no unwanted tools, other objects or materials either lying around or unsecured. Anything that someone can slip, trip or fall on is simply a timebomb waiting to go off. Looking at the ship as a whole as a workplace - which of course it is - helps greatly in preventing or at least minimizing incidents.

4. Awareness - it all starts with the power within you

Lack of awareness, and certainly any arrogance, on the part of the ship's staff can of course lead to incidents, and plainly staff who do not have the right level of safety knowledge about what they are doing are more likely to encounter harm.

So it is vital that ship staff are regularly briefed and reminded about all safety aspects of their tasks, so the workplace can become a safer place, for them as well as for others. Also, the ship staff themselves need to engage with the whole notion of instilling within themselves the required safety standards and the basic tenet that safety is one of Synergy's core values. And this all starts with the power within each person to be safe, to ask, to train, to apply, to practice and to adopt the safety culture of the company. As has been so very rightly said: "No job is well done unless it is safely done".

5. Teamwide responsibility and cooperation - united we stand, divided we fall

Safety and health on board, for crew and visitors alike, very much depends largely on a team effort in creating a safer and healthier workplace - the ship. All should work together as a single unit, moving forward in unison in setting new

standards of safety, in which proper familiarization and implementation play a vital role. Arming ship staff, as a whole, with proper training and knowledge makes them more productive, efficient and above all safe.

6. Communication and interaction in compliance with the culture

The bottom line is that nothing promotes the safety and health of a ship as a whole better than proper communication and interaction, both among the crew and between ship and shore. Open communication channels are the best way to share empathy, concerns about safety, what you have learned and how to apply your training and how to lead by example. Workplace safety and health is achievable, as long as we instill the right attitudes within ourselves.

7. Conclusion

The list of points could go on and on. Safety and health are a proactive and ever-expanding norm as individuals, companies and other organisations seek improvements and breakthroughs. A few, however, still fall under the spell of regarding workplace safety and health as a paradox, reckoning that accidents inevitably happen, almost as if by predetermination, no matter what the culture, or how much people are instructed or trained.

But that is not so, and Synergy is seeking to prove it by greatly investing in the safety and health of people, property and environment. Any who remain in denial on that - inevitably leading to both minor and major incidents - simply foster complacency and carelessness.

At Synergy, as long as we continue to steer the best course for ourselves and others, using as our guides the charts and compass of training, familiarisation, compliance, implementation and communication, we will always come safe home.

Contributed By: Mr Remy Salaya, Oiler (ex - BW Hazel)



Synergy Group



Citigroup, Karen Purnell, Managing Director, ITOFF; Bob Sanguinetti, CEO, UK Chamber of Shipping; Katharina Stanzel, Managing Director, Intertanko; Patrick Verhoeven, Managing Director, IAPH and Chris Welsh MBE, Member of the Lloyd's List Editorial Board.

The judges remarked: "Our panel felt that in a hugely competitive market it was the relative newcomer that was showing the old guard how to innovate and optimize operations for clients while also putting seafarer wellness, safety and training at the heart of the business."

Accepting the award, Capt. H.S. Swaminathan said "We could not provide top-end services to our customers without all 'Synergians' buying into our vision of ship management excellence. Both at sea and on land they deserve recognition and respect. I would especially like to thank Synergy's 11,000+ seafarers for showing the courage to face the challenges of seafaring day in and day out. This award is testament to their dedication and excellence."

Speaking to the media, Capt. Rajesh Unni paid tribute to its seafarers, saying "They make Synergy tick. I can't thank them enough for their dedication and hard work all year. As for 2020, I can promise we'll seek to raise ship management standards again. We will maintain our industry-leading unplanned off-hire and lost injury time rates because we understand what helps our customers most. However, it is our world class seafarer retention rates which facilitate the consistency of service excellence that allows us to perform so well on industry KPIs. Top of the agenda will be keeping our seafarers safe and well."

Top award for Synergy Group

Synergy's commitment to ship management excellence was recognised at the prestigious 2019 Lloyd's List Europe Awards hosted at the Hilton Park Lane hotel in London on 10 December, 2019.

Synergy won the 2019 Lloyd's List Excellence in Maritime Services & Ship Management Award, which recognises the achievements of the ship manager or agency that has demonstrably raised the standards of ship management over the last year.

Attending the event alongside Captain H.S. Swaminathan was Mr Rune Zeuthen, the recently appointed head of our new Europe office, in Copenhagen.

The independent and distinguished judging panel this year included Robert Ashdown, Secretary General, International Association of Classification Societies; Tom Boardley, Secretary General, Cruise Lines International Association; Lars Green, CEO, Green Consulting Group; Richard Greiner, Partner, Shipping, BDO LLP; John Lloyd, CEO, The Nautical Institute; Michael Parker, Global Head for Shipping, Logistics and Offshore Industries,



"Our panel felt that in a hugely competitive market it was the relative newcomer that was showing the old guard how to innovate and optimize operations for clients while also putting seafarer wellness, safety and training at the heart of the business"



Global recognition for Synergy Group

Synergy Group’s collaboration with the Tata Institute of Social Sciences in the development of a helpline (in nine languages), designed to reduce seafarer suicide and support the mental health and wellbeing of all maritime personnel, was honoured by SAFETY4SEA. At a glittering ceremony at the Yacht Club of Greece in Piraeus on 2 October, Synergy was presented with the 2019 SAFETY4SEA Technology Award.

Synergy won this prestigious accolade after more than two months of online voting by seafarers worldwide. “It is seafarers around the world who voted for Synergy this evening and we truly are grateful,” said Rune Zeuthen. “This award is really for them. They do a fantastic job every day in very difficult conditions.”

In collecting the award Mr. Zeuthen was accompanied by Mr. Antonios Vrondisis, Vice President of QHSE and Vetting at the Navios Group, one of the world’s leading shipowners and a long-standing and much valued Synergy customer.

Mr Vrondisis said: “Synergy’s reputation for digital innovation is unmatched among ship managers. They are true pioneers when it comes to using technology to solve safety and operational challenges. It is to their great credit that they are also using their expertise to address seafarer wellness which is an issue of utmost importance to us all at Navios.”

Synergy has emerged as a lead innovator of digital shipping solutions, including partnering with Alpha Ori Technologies in the pioneering developments as outlined in our article titled “ClassNK approves Alpha Ori’s SMARTship platform”. Synergy turned its technological expertise to seafarer wellbeing at the end of 2018, when it launched iCALL. This helpline is available free of charge to all maritime personnel – at sea and ashore – in English and eight other languages and at all times, by phone, email or the chat-based nULTA app.

“We feel seafarers should not only be defined and valued based on their ability to get a ship from A to B safely,” said Capt. Unni. “They are individuals, multi-dimensional human beings employed in a difficult and isolated environment. We believe it is imperative that they are valued and treated on that basis. With iCALL we saw that we could use the latest technology to essentially take this message to a global maritime audience. We thank SAFETY4SEA for recognising our efforts.”

Synergy Group and NORDEN agree Ship Management deal

Synergy has been chosen to manage the entire owned dry bulk fleet of renowned shipping company NORDEN.



NORDEN's 15 owned bulk carriers will be supported from Synergy's new office in Copenhagen, Denmark, which is headed by industry veteran Mr Rune Zeuthen, who recently joined the Synergy family as General Manager of Synergy Marine (Europe) A/S.

Most of the management services will be provided from our head office in Singapore and our technical office in Chennai. Technology and digital support will be supplied by Synergy's smart shipping partner Alpha Ori Technologies ("AOT"), the developer of the SMARTship platform, which will be installed on multiple NORDEN vessels in the coming months.

"It is an honour to be named as NORDEN's new ship manager," said Capt. Rajesh Unni. "NORDEN is one of the most respected names in shipping, and we are thrilled that we will be playing our part as they move in a new strategic direction. I think we have shown time and again that Synergy is uniquely equipped to take on the most demanding technical and commercial ship management challenges. We will bring our full range of technical, crewing, training and technological services to bear on behalf of NORDEN."

Founded in 1871, NORDEN is one of the world's leading independent shipping companies, listed on Nasdaq Copenhagen. NORDEN has turned to Synergy Group as it strategically pivots towards increasingly becoming an asset trader. "In-house technical management of the dry cargo fleet does not provide NORDEN with the flexibility required to efficiently manage large and frequent fluctuations in the number of owned vessels," said their Head of Asset Management, Henrik Lykkegaard Madsen. "We have therefore decided to outsource the technical management of our dry cargo fleet to the highly reputed company, Synergy Marine Group."

A key reason that NORDEN chose Synergy was its digital and smart shipping expertise, which optimises productivity, improves safety and offers a range of cost savings.

Getting to Zero Coalition launched with Synergy Group as a member

Synergy Group is proud to confirm its founding membership of the Getting to Zero Coalition, an alliance of committed business leaders and decision makers on decarbonisation of international shipping by 2030.

Spearheaded by the Global Maritime Forum, Friends of Ocean Action and the World Economic Forum, the Coalition comprises around 80 public and private sector members. It follows the IMO strategy on reducing greenhouse gas emissions, but with an even more ambitious "moon-shot" goal – to get commercially viable deep sea vessels powered by zero emission fuels by 2030.

The Getting to Zero Coalition was launched in conjunction with the UN Climate Action Summit in New York on September 23, 2019.



Team “PACIFIC ENDEAVOR”



While transiting the Strait of Gibraltar last August the crew of the Synergy-managed “PACIFIC ENDEAVOR” spotted three people in a small craft, frantically waving their hands and blowing their life jacket whistles.

The “PACIFIC ENDEAVOR” had to perform a series of manoeuvres to attempt to rescue the craft, which was no more than a dinghy which was partially deflated and taking on water. Once the vessel got alongside the dinghy, lines were thrown and the crew pulled its three occupants out and to safety.

The Spanish authorities had been informed about the situation and the planned rescue, and later sent the following letter:

Appreciation from the Spanish Authorities

“We desire to show you our most sincere gratitude for the humanity and professionalism of the Captain and crew of your vessel PACIFIC ENDEAVOR, thanks to whom three persons have been rescued in the Spanish responsibility SAR waters. We expect that you transmit our gratitude to the Captain and crew of the vessel.”

Team “PACIFIC ENDEAVOR” preserves the integrity of global SAR services with a textbook rescue

Team “CAP SAN TAINARO” breaks record for productivity



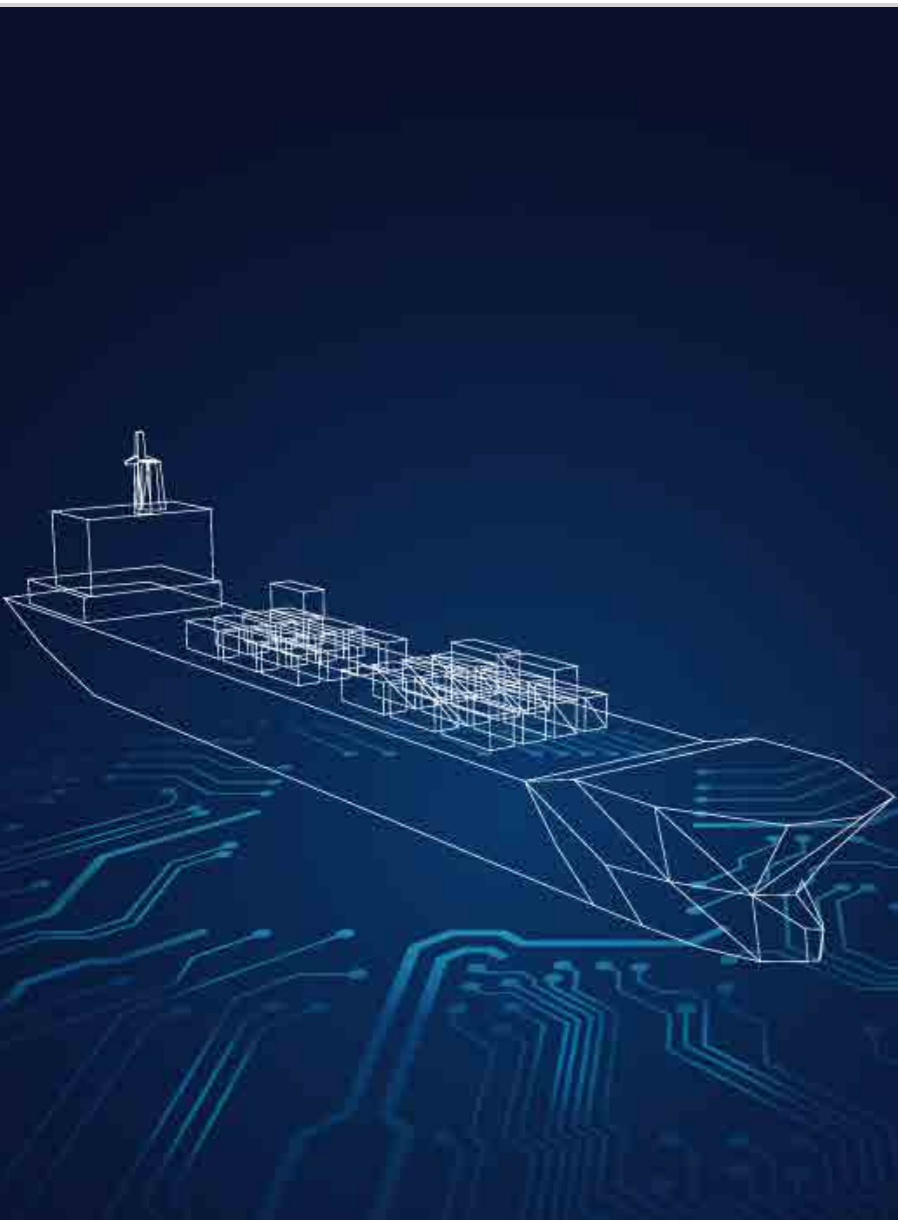
Together with the Port Salalah Container Terminal, the Synergy team on board the “CAP SAN TAINARO” was recently involved in record-breaking productivity, delivering 412.97 Port Moves per Hour (PMPH) and handling 3,820 moves in a port stay of 9.25 hours.

This is the highest ever productivity by any port in the region. Both owners and charterers praised the crew for their precision, planning, documentation and for ensuring that the highest operational and safety standards were maintained amid this record-breaking achievement.



Team picture at dock

ClassNK approves Alpha Ori's SMARTship platform



Pictured: The "HOURAI MARU" (Japanese for "GREAT FORTUNE")

The "HOURAI MARU" is the first ship to receive ClassNK approved SMARTship status

Classification Society ClassNK has approved a new onboard Internet of Things (IoT) platform for remote monitoring and decision support. Alpha Ori Technologies' SMARTship is a digital shipping solution for data collection, monitoring and operational advice. SMARTship collates material from disparate onboard systems and displays it for crew and managers, to assist them in optimal decision-making.

This certification means that the platform is approved as a computer-based system that conforms to ClassNK's rules on products that feature remote monitoring and diagnostics, situational awareness and decision support systems, both on board and ashore.

The SMARTship platform takes a holistic approach to solving maritime pain-point problems for everyone in the logistics value chain, including ship operators, owners, managers, port management, surveyors, ship registries, insurers and shipbuilders.

Can the battle against corruption be won?

Corruption has been defined as the abuse of public power for private gain, and in one way or another it is probably almost as old as human society itself. Nowadays, though, its many strands include unilateral abuses, such as embezzlement and nepotism, and nefarious activity linking public and private stakeholders, such as bribery, extortion, influence peddling and fraud. Corruption hurts the poor disproportionately, hinders efforts to achieve Sustainable Development Goals and stalls human progress by reducing access to social services and diverting resources away from investments in infrastructure, institutions, and social services. In the political realm, corruption undermines democracy and good governance by subverting formal processes.

Corruption in elections and legislative bodies reduces accountability and representation in policy making. Corruption in the judiciary weakens the rule of law, and corruption in public administration results in the unequal provision of services. More generally, corruption erodes the institutional capacity of government as procedures are disregarded, resources are siphoned off and officials are hired or promoted without regard to performance.

In their book 'Corruption in India: The DNA and RNA' authors Professor Bibek Debroy and Laveesh Bhandari say that public officials in India may have cornered as much as Rs. 92,122 crore (\$18.42 billion) in 2011, or as much as 1.26 % of the GDP, through corruption. The media daily report one outrage or another, the next always seeming more serious than the last.

For example, we thought the 2G scam was large, but against the coal one it pales into insignificance. Initial anger slowly changed to disappointment that the system was letting us down. With the campaign led by Kisan Baburao Hazare (Anna Hazare, as he became popularly known) one started feeling hopeful, but now even that has fizzled out one feels only sad, helpless and impotent. Considering that, putting it very bluntly, rot permeates the whole system, can we do something about it? Can the common citizen engage with the system and fight the corruption that seems to have seeped into every human activity in both the public and private domains?

Over many years, people from different walks of life have related to me the harassment and other negative experiences they have faced in their interactions with public service delivery systems. One very enlightened activist recounted how, despite his watchfulness, he was forced to part with his money at one of the registration offices. Only when he asked for receipts did he realise that Rs 200 was unaccounted for. In another instance, some street vendors explained how their incomes were at risk each day as they had to pay the local potentate, the beat policeman and the city corporation food inspectors just to stay in business. Another team from a nearby residential layout explained the problems that they were facing with the local land developer, the local police and the urban development authority officials.

A group of officials from a central government facility described the corruption in their own office, which they said was suffocating all efforts, as the head of the office himself was mired in it. A lady from an insurance company narrated the harassment meted out to her by senior colleagues - just because she did not cooperate in the corruption that had become the office culture.

Recently I myself complained to the local police station about traffic hazards due to the parking of heavy trucks on the ring road, but I saw no action being taken. On further enquiry, some of the drivers involved told me that all I had achieved was an increase in the unofficial parking fees that they had to pay.

From many conversations with a retired High Court Judge, a former Chief Justice of the Supreme Court of India and an actual sitting Judge, I have learned about the challenges the judiciary itself is facing, and how public confidence in their own high standards is being undermined.

Some young men in the Mysuru district had identified corruption in the MNREGA works being undertaken in their villages. They complained to the officials and politicians concerned, but to no avail. They wanted to know what else they could do to ensure that justice was done and the guilty punished. (A difficult question, indeed!) What was even harder for them to digest was the fact that they were being threatened, and people from their own village were castigating them for being "troublemakers".

Also, senior journalists have remarked to me that what they called paid news was another form of corruption, and that the media were no longer the 'watchdog of democracy' that they were meant to be.

How do we fight corruption, in view of all this? Can we ever again trust a system which has become so very well oiled in encouraging corruption? Will good governance be something that the average Indian citizen can only dream about? To tackle this, we first need to understand that corruption is a complex animal. It is plain that fighting it does not involve simple solutions. We need to look at the whole canvas, understand the multidimensional nature of corrupt practices and try to figure out how an entire system will either favour or inhibit corruption.

There are probably only two overall kinds of corruption - collusive corruption and coercive corruption. In collusive corruption there is no individual victim - it is an established system that is simply exploited, as the giver and taker of the bribe collude in achieving whatever is the available advantage. The 2G scandal is an example, albeit on a large scale. Telecom companies were said to have colluded with corrupt politicians and bureaucrats in achieving their own ends. A more everyday instance would be a motorcyclist paying off the policeman who has caught him not wearing his helmet.

Coercive corruption has a defined victim. The bribe giver is forced to pay in order, say, to get what he/she wants done. A simple example would be a farmer having to bribe the village accountant in order to get his land records, or someone bribing the Vehicle Inspector so as to pass a driving test. People do not want to participate in the corrupt process, but are left with no choice - they do not like to endure the purposive harassment of things being delayed or even withheld, and usually give in. But when someone who feels victimised finds the courage to complain, anti-corruption ombudsman organisations like the Lok Ayukta will help.

Furthermore, it is estimated that "only" 30% of corruption in India is coercive corruption. If this is right, then the other 70% is collusive, and it means of course that society's general level of integrity and values have steadily eroded and that this process is probably continuing. While this sounds like a dismal picture, I would like to believe that it is precisely why one can be hopeful of fighting corruption. All that is needed to combat collusive corruption is to decide to become honest. It is that simple. Gandhi's dictum of "being the change that one wants to see" will work, here.

So the key contest is within each of us - our own inner battle. Can we, all of us, stand tall and decide to stay honest, follow the laws of the land, refuse to become corrupt and remain incorruptible in all that we do? If so, the struggle against corruption could truly be won. Laws and anti-corruption institutions can only provide enabling environments when things go wrong and one seeks redress. The real difference, and the core change, will come from courage to stand against the tide and lead a value-based life, irrespective of the consequence. In today's market-driven world, it may be uncomfortably expensive to stay honest, but the genuine fulfilment from 'being the change' can never be matched by petty conveniences sired of a dishonest existence.

Dr R Balasubramaniam is a development activist, public policy advocate, leadership trainer and author. He is the founder of the Swami Vivekananda Youth Movement and the Grassroots Research And Advocacy Movement (GRAAM) in Mysuru. For more details, visit www.drrbalu.com

Lubrication Matters #4: The effects of water on lubrication

As we feature the fourth and concluding part of our series on 'Lubrication Matters', we are exceedingly grateful to Mr Sanjiv Wazir for his time and willingness in sharing his knowledge with our readers.

"Water, water, every where, nor any drop to drink.

Though not as life-threatening as in Coleridge's Ancient Mariner, water can certainly make life difficult for those using marine lubricants.

The end results of water contamination in lubricants are corrosion, excessive wear and premature failure of metal surfaces, and these arise in various ways : water can act directly, and it can also impair lubricant effectiveness.

THE EFFECTS OF WATER ON LUBRICANTS

Water may not react directly with hydrocarbons, but it helps promote base oil oxidation, particularly in the presence of wear metals like Fe, Cu and Sn, all of which act as catalysts. In some types of fluids, water can react with the base oil, resulting in the formation of sludge, acids and deposits : control systems using phosphate ester fluids are particularly susceptible to hydrolysis like this.

Sulphur-phosphorus EP additives can release sulphuric and phosphoric acids in the presence of water. Water also attacks, hydrolyses, agglomerates, consumes or washes away a host of other additives such as antiwear, rust inhibitors, antioxidants, dispersants, detergents and demulsifying agents. Once such depletion has taken place, rapid deterioration of the lubricant and attack on machinery sets in : lubricants used in deck machinery can be particularly susceptible.

By-products of oil degradation can react with emulsified water to form resinous, sticky materials. Often, sludge and varnish formation - along with the resultant restrictions on oil flow, valve sticking, bearing metal wipeout, etc - can be directly attributed to the presence of water in the oil.

THE EFFECT OF WATER ON MACHINERY

Water in lubricating oil affects machinery in a variety of ways. It simply does not lubricate as well as oil. Dissolved water can increase metal corrosion, and in transformer oils it can greatly reduce dielectric strength. When water comes out of solution and forms an emulsion, or free water, the reliability of the machinery can be seriously compromised.

LOSS OF FILM STRENGTH

Hydrodynamic bearings depend on oil viscosity to provide

critical clearance under load. Water viscosity is low (1 CST at 20 C), and water globules pulled into a bearing load zone reduce surface clearance and result in contact of opposing surfaces. In rolling element bearings and other EHL contacts, where local pressures can exceed 10,000 Bar, lubricant viscosity increases exponentially (according to the pressure-viscosity coefficient α), such that the lubricant momentarily behaves like a semi-solid and thus provides the separating film. Water viscosity remains virtually unchanged regardless of load, and this results in collapsed film followed by fatigue failure.

HYDROGEN EMBRITTLEMENT

Water can enter even microscopic fatigue cracks by capillary action. Within these cracks, under extreme pressures, water dissociates in contact with unoxidised metal to release hydrogen ions, which then permeate the interstitial spaces of the metal lattice causing embrittlement of the metal.

LOSS OF FATIGUE STRENGTH OF STEEL

As little as 10 ppm of water reduces the fatigue strength of steels by 10%. The increase in water concentration in oil progressively reduces fatigue life - rolling element bearing manufacturers estimate that bearing life is halved with water content as little as 50 ppm.



VAPOROUS CAVITATION

Where a lubricant is subjected to a sudden change in pressure, vaporisation followed by rapid condensation of water can occur. The rapidly condensing and collapsing vapor bubble can form a microjet that implodes on the machine surface. Under pressure, water can flash or explode into superheated steam in bearing load zones, which can sharply disrupt oil films and even fracture surfaces.

RUSTING AND CORROSION

Rusting requires water, and water dramatically increases the corrosive potential of acids. Rust and corrosion cause pitting and etching on bearing surfaces, resulting in loss of surface profile, thus disrupting the formation of HD and EHL films. Rust and oxidation inhibitors (r & o additives) are used in many marine lubricants in order to suppress this. Rust particles will flake off from surfaces and fall into the lubricant, destroying the surface finish and also circulating throughout the whole system and causing abrasion and fatigue.

AERATION AND FOAMING

Water lowers the interfacial tension of oil, which can destroy its air-handling ability, leading to aeration and foam. Air weakens oil films, increases heat, induces oxidation, causes cavitation, and interferes with oil flow : oil delivery to bearing surfaces is disrupted.

MICROBIAL GROWTH

Many microorganisms have the potential to use hydrocarbons as a source of carbon and energy for growth. However, as such growth can only take place where free water is present, it will usually be found at an oil/water interface. The microorganisms often develop as a thin mat of fungal threads floating at the interface, and (as the biomass accumulates) bacteria and yeasts also grow in the mat, trapping particles such as dust, grit, metal oxides and swarf. The main bulk of the biomass is increased by the production of polymers due to microbiological activity, leading to an emulsified mass between the bulk oil and the water layer.



Organic matter from the interface will eventually sink to the bottom of the tank, building up a layer of sludge and debris. Under the sludge blanket, oxygen is scarce, so anaerobic conditions will predominate, producing a favourable environment for sulphate-reducing bacteria. Products of microbial growth can cause stable emulsions to form, considerably reducing centrifuging and filtration efficiency. Further consequences are local corrosion, reduced load-carrying and EP properties. Sulphate-reducing bacteria produce sulphides, precipitating as iron sulphides, which are implicated in severe local pitting and corrosion. Microbial attack is a serious issue with many metalworking fluids that contain water.

WATER WASHING

Water sprays can directly wash lubricating oil or grease out from the lubricated zone. Lubricant density is lower than that of water, and too much free water can displace the lubricant if allowed to accumulate in a bearing. When grease is contaminated with water, it can soften and simply flow out of the load area.

CONCLUSION

Reliable machine operation is vital, both on board ship and in general industry. Water contamination of lubricants can cause a wide range of operational problems and significantly affect machine reliability and longevity, so every effort should be made to keep water from entering lubricated mechanical systems.

Sanjiv Wazir

Mr. Wazir graduated in Mechanical Engineering from the Indian Institute of Technology, Bombay, in 1981. After sailing as a marine engineer for over 10 years, he became involved in shiprepairing. His vast experience in the operation, maintenance and repair of diesel engines, hydraulic systems, turbines, compressors, gearboxes, refrigeration plants and other industrial equipment is complemented by over 15 years in the field of lubrication, where he has represented Chevron, and later BP Marine Lubricants, in India. Since 1999 Mr. Wazir has been a guest speaker on tribology and lubrication at several institutes, and he is now Technical Advisor to LUKOIL Marine Lubricants.



At the Maritime CEO Forum

Capt. Unni at the Hong Kong Maritime Week 2019

The Hong Kong Maritime and Port Board, together with its co-organisers the Hong Kong Shipowners Association and the Hong Kong Maritime Museum arranged the fourth Hong Kong Maritime Week, from 17 to 23 November 2019, to "Propel Hong Kong" as a renowned international maritime centre.



At the Capital Link HK Maritime Forum



Capt. Unni at the Global Maritime Forum

More than 100 leaders from industry, government and the wider society in 37 countries took part in the Global Maritime Forum's Annual Summit in Singapore in October 2019. They identified ways in which collaboration and leadership could improve the marine sector's performance and its contribution to sustainable long-term economic development and human wellbeing.

Capt. Unni was part of the working group on digital technology, looking at driving improvements in efficiency across the maritime logistics chain.

Addressing the august gathering, Capt. Unni said that there was huge potential for improving efficiency and reducing waste through digitalisation and data sharing, but that it was also clear that significant barriers must be overcome if the full benefits were to be reaped. Among those identified were a lack of trust, a lack of standards underpinning data collaboration and an uneven incentive structure, such that those gaining most from the sharing of data were often very different to those bearing the majority of the cost.

Capt. Nalwa joins IMU advisory board



Capt. Charanjiv Singh Nalwa, Fleet Manager and the head of SMRPL's Delhi office, has joined the School Board of Nautical Sciences of the Indian Maritime University.

This came into being as a Central University through an Act of Parliament (Act 22) on 14 November 2008, and plays a key role in the development of trained human resources for the maritime sector.

Capt. Nalwa said: "As a proud Synergian, I'm excited to support Synergy's efforts to develop our industry's next generation of seafarers, leaders and innovators by being on the School Board of Nautical Sciences of the prestigious Indian Maritime University".

Enmore Oil Tanker Shipping Summit 2019



Capt. Madhu V, Director, Synergy Commercial and N2 Tankers, was a speaker at the annual Enmore Oil Tanker Shipping Summit 2019 in Shanghai.

The event attracted more than 100 global industry experts. Addressing the audience, Capt. Madhu V emphasised how the Synergy Group is at the forefront of transforming the multi trillion dollar maritime industry from disjointed analog-based entities to smart digital enterprises, highlighting how most leading owners and operators are embracing the benefits of digitalisation in seeking greater operational efficiencies and competitive advantage.



OMC Shipping's ninth anniversary celebrated in style



Synergy Group Operations Inc. celebrated the ninth anniversary of OMCS by organising a seminar for senior ship staff, to discuss the key safety challenges affecting the industry. The event was graced by Mr Yasuhiro Kazama and Mr Junichi Ueyama, respectively the outgoing and incoming OMCS President/MD, and Mr Chinmoy Ghose, GM, FMD, Captain Natarajan, GM, Operations and Technical Manager Mr. Sudeep Sahoo emphasised OMCS commitment to crew training, safety, motivation and overall job fulfilment.





iCALL

Synergy calls for action on mental health awareness

Synergy Group organised a day-long workshop on the 'Mental health enhancement of seafarers' at the Tata Institute of Social Sciences, Mumbai, which is also the home of iCALL. The workshop was also attended by senior seafarers and executives from leading shipping companies, including BW Maritime, Gulf Energy Maritime, PJSC and Wilhelmsen Ship Management (India) Pvt. Ltd.

In his keynote address Capt. Unni emphasised that mental health awareness should become a core component of seafarer first aid training, that more must be done to understand and alleviate the mental strains of life at sea and that the dangers were becoming ever more apparent.



“Mental health issues on board ships are hazards and need to be addressed with the same urgency and commitment with which we address safety-related issues.”

Urging that this is a problem that we cannot ignore, Capt. Unni said: “Shipboard staff should be equipped with the skills to address and promote the psychological wellbeing of seafarers, to ensure that no seafarer takes extreme measures because of a lack of help and support. I think an obvious first step would be making mental health training available to employees of all maritime companies. Ship operators and managers certainly can – and should – offer this training to seafarers, starting with officers. It’s the least we owe the teams that serve us 24/7, 365 days of the year. Mental health issues on board ships are hazards and need to be addressed with the same urgency and commitment with which we address safety-related issues.”

Also in attendance was Mr Amitabh Kumar, Director General of Shipping–India, Mr Amar Singh Thakur, General Secretary of the Maritime Union of India and Mr Abdulghani Serang, General Secretary of the National Union of Seafarers of India. Opening the event, Mr Kumar said that seafarers were on the front line of global trade and security and their mental health was of paramount importance, adding that : “A lot has already been done to identify the causes of the failing mental health of seafarers, especially in the context of Indian seafarers. I am glad that the Synergy Group and Tata Institute of Social Sciences have come together to find a solution through iCALL.”

Dr Aparna Joshi, Project Director of iCALL, said that creating support networks was an essential first step in addressing the mental health of seafarers, noting that the “aim is to eliminate the stigma around mental health and encourage seafarers to come forth and seek help.”

Never crossing the line, while crossing the line: from Slimy Pollywog to Trusty Shellback



Celebration of a time-honoured tradition

Seafaring is chock full of myths and traditions. Many of these, from the Sirens and sea monsters of the Odyssey to piping from the boatswain's call, date back hundreds and perhaps even thousands of years, and the line-crossing ceremony is perhaps the most interesting and significant for today's mariners.

As the "FAIRCHEM VICTORY" began a 26 day voyage to Durban, the senior team wanted to organise some bonding activities, especially since there had been a crew change in New Orleans.

The vessel was due to cross the Equator a few days into her voyage, and we knew that there could be nothing better than the line-crossing ceremony.

This marks a mariner's transformation from Slimy Pollywog (someone who has not crossed the Equator line before) to Trusty Shellback, or Son or Daughter of Neptune. The ceremony used to be seen as a way to test sailors on their seaworthiness, in a folkloric and informal sense of that word.

It is arranged that, on crossing the Equator, "King Neptune", god of the sea, appears, to give his judgement before permitting entrance to his saltwater realm, and also to hear charges brought against the Slimy Pollywogs who have not yet come before him.

With minimal resources the crew engaged their imagination to great effect (as the photographs will confirm) in bringing King Neptune, his pretty wife and various soldiers to life, and in the presence of the ship's company all first time Equator-crossers were summoned before the royal entourage. They were symbolically captured and made to do the King's bidding before starting a fun-filled procession towards creative haircuts.

On their return, they were greeted with the Holy Drink, specially prepared for them as newly anointed Sons of Neptune, and were finally (and repeatedly) pronounced worthy of sailing the Seven Seas.

The ceremony bonded the entire team, and reminded us that (amid the serious business of safe sailing) these seagoing traditions are about precisely that, and about getting together, having a few laughs, letting go of any differences and looking forward to the next day at sea!



Capt. Inguva V S Sastry

Meet Master of "PACIFIC ENDEAVOR", Capt. Inguva V S Sastry, whose promptness and presence of mind helped saved three seeking to transit the Strait of Gibraltar in a capsizing dinghy.

Captain Sastry started his long and illustrious career as a deck cadet in 1980, and took his first command (on a Japanese-owned Aframax tanker) in 1995. He went on to serve with Navix and was later with MOL Mitsui Lines when Navix was taken over by MOL. Speaking to the Editorial Team, he said he has enjoyed every moment of the last four decades and would not bat an eyelid at doing it all over again. Here is the rest of the interview, we give further account of this rescue later on.



Lives saved, rights protected!

ET: Who informed you about the stranded people? What was your first instinct? Have you ever been in such a situation before?

Captain Sastry: Third Officer Mr Bala Elangovan spotted the boat on the port bow and informed me about the stranded people. My first instinct was sheer disbelief, but that instantly turned into a rush of emotion and compassion. The stranded people started frantically waving and whistling to gain our attention and requesting our help.

I have had my share of SAR missions in the course of my career. I was in a search-rescue situation for four days off the west coast of Mexico in December 2014. I was the on-scene commander back then and got the assistance of Mexican Navy helicopters and two other merchant ships.

ET: What was the biggest challenge faced by the team in the rescue operation?

Captain Sastry: I would not call it a challenge, as such, but it was certainly a real-life learning curve for the team. It was imperative to maintain the ship's position broadside and give the people in the dinghy a lee from the wind, to protect them. The current was strong and we had to counter the set and drift constantly with a series of helm and engine movements, as well of course as keeping a safe distance from land.

ET: How important is shore-based support, here?

Captain Sastry: Shore support is our backbone in such situations. A lot of expertise is available there, partly based on the various situations that they encounter day in and day out. There are many incidents, worldwide, and reports get passed on to them, and the lessons they learn, read about and experience can help us in such situations. During this rescue operation I was in constant touch with DPA Captain Yazad.

ET: How would you describe the reaction and response of the shore search and rescue authorities?

Captain Sastry: The reaction and response of the Spanish SAR authorities was outright commendable. They immediately informed us that they were mobilising their rescue boat, which was promptly dispatched, and the entire operation, from spotting the dinghy to landing the rescue launch, took under an hour.

ET: What effect did the rescue have on the morale and spirits of the ship staff?

Captain Sastry: It was a job well done and safely executed, without any injuries. Initially, the staff was in a state of mild disbelief that they would have to perform a rescue, but later they were elated and happy to have carried it out. Moreover, the staff also understood the rigidities of life at sea, that anybody can be in such a situation, and that help must always be given to those in need.



Diversity and Inclusion - a belief at Synergy.

Inclusive Walkathon a huge success!

To help raise worldwide awareness of the need for inclusion of People With Disabilities, Synergy collaborated with the India Inclusion Foundation to organise an 'Inclusive Walkathon' in Chennai. The idea came up in discussions between Capt. Unni and the founder and CEO of the India Inclusion Foundation.

The brand ambassador was war veteran and India's very own Blade Runner, retired Major D. P. Singh. Any form of exclusion means disconnection from social relations, and disabled people and their families often face isolation and ostracism from the wider society, with multiple barriers hindering amalgamation into the mainstream.

Although about one in ten of the population has a disability, there is still an 'embarrassment factor', usually meaning self-consciousness and awkwardness in the presence of a disabled person.

The Inclusive Walkathon initiative was the first of its kind, and everyone, irrespective of disability, could take part in a 3km or 5km walk. The unique feature of this particular event was the 'Buddy Walk', which required those with no disability either to walk with someone who has one or to blindfold a partner and walk half the distance and then swap places.

Many told inspiring stories about the hardships they had faced, the problems they had overcome and what inspired them in never giving up. They also shared several examples of global companies that no longer discriminate, thus providing equal opportunities so disability does not get in their way.

We thank all the team members who helped make this a huge success. Naming just a few, we especially thank Capt. Ravi Kohli and Johnson Leonard for organising the event and ensuring that the participants all had snacks and drinks afterwards, Capt. Venkat from our Training Department for coordinating the event and Anand C.J. for volunteering as official photographer.



“From Jharkhand with love”

Our CSR team recently visited two schools in Latehar, Jharkhand - a state in eastern India - attended by children from tribal communities. The schools are in a rural area with a fairly low population density and insufficient qualified teachers. Also, teachers there tend to come from similar backgrounds, and seldom have any opportunity either to pursue something different or explore the world beyond their own village and community.

Together with Amit Raj Sinha, MD and CEO of Sigachi Industries Pvt Ltd and Kalki Yasas, Senior Director of SalesForce, the CSR team sought to make a positive difference and help broaden the perspective of some of these teachers. All involved had felt that it would be beneficial and empowering for them to venture outside Jharkhand and experience different cultures, meet new people and generally expand horizons, and we were delighted to be able to arrange this. One of the teachers wrote a very kind thank-you note, as follows:



“It is with immense joy and gratitude that I write the following lines. Due to your support, we were privileged to have made an educational tour to Orissa, Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. We could never imagine travelling that far and learning so much about different cultures, people, food and lifestyles. Those seven days proved to be a lifetime full of memories and experiences. Our worldview has widened.

In Kerala we saw large cargo ships for the first time and travelled by boat, train and air. We saw beautiful places, such as beaches, hills, valleys, coffee gardens, tea gardens, clean roads, rubber estates, cashew gardens, and areca nut and pepper plantations. It was great to see towns without traffic jams and with clean trains and clean railway and bus stations. We also saw fishing harbours and forts built by the Europeans and some science centres and museums, too.

In Kerala we observed that the sun goes down pretty late, and most of the people we met were educated, tolerant and helpful. The government schools were functioning well and it was a pleasure to see the efficient transport system. The public hospital facilities were impressive, and we also managed to see advanced agricultural systems and were surprised to see people inhabiting steep slopes and yet able to cultivate various plantations to make a living.

We learned how coffee, tea and rubber are cultivated and processed, and observed people using Ayurvedic medications, which was new to us as well. We enjoyed seeing coconut gardens and backwaters and eating the local cuisine. The list of new experiences we’ve had is endless and truly unforgettable.

Four memorable days in Kerala passed in a jiffy, and before we knew it we were at Bangalore Airport and onward to Ranchi, Jharkhand. The whole experience is still vivid in our memories. We have been touched by the love and care we received from our hosts and well-wishers.

We will pass on the knowledge we gained to our students as well. As teachers from more remote and tribal communities, we are infinitely grateful to you for the experience. Your kindness has energised us to commit ourselves to the service of poor students who need help and education.”

“The CSR team sought to make a positive difference and help broaden the perspective of some of these teachers”



Artificial Intelligence Or Emotional Intelligence?

Today's shipping industry is moving fast in adapting to the latest technologies, with "artificial intelligence", "data analytics" and "autonomous shipping" leading among the buzzwords.

Somewhere amid all this noise is what is routinely called the "human element", and over 90% of world trade depends on the professionalism and competence of seafarers who have shaped this robust industry over centuries and are at the same time the root cause of 70% of marine incidents.

According to the UK P&I Club, human error costs the maritime industry \$541m a year, and the human element is recognised as the most significant source of risk in shipping. Seafaring has always been a challenging profession, with seafarers at the sharp end as regards incidents. It sometimes seems that regulations proliferate while crews to apply them shrink commensurately, and this can take its own toll.

For example, according to a study by the World Health Organisation, seafaring is the second riskiest profession in terms of suicide, whose rate among seafarers has more than trebled since 2014. The UK Chamber of Shipping reveals that cadets - our youngest seafarers, of course - are the worst affected. Some mariners' mental health can be very poor, and the industry must ask itself whether it is doing enough to train people to face today's challenges. For instance, are a vessel's senior officers equipped to identify these issues and thus help with mental health matters at sea?

Autonomous operation of ships is being driven by the technology providers, and one of the benefits is said to be removal of the human factor from the equation, hence (the logic goes) solving the problem of "human error" at sea.

But there is a long way to go before autonomous ships become a widespread reality, and in this drive towards greater reliance on technology are we at the same time losing vital focus on some basic skills - what might be called emotional intelligence?

AI is here to stay, but what about "EI"?



'IMO 2020 : The Big Shake-Up'

On publication of this article the 1 January 2020 compliance date for the sulfur cap fuel changeover will have passed. This is probably the most significant regulation change, with the greatest scope, since internal combustion engines came into being. It's precise effect, and how the industry will adapt to this change in fuel specifications, are matters of the utmost concern.

The maritime industry has long been planning, and there have been two approaches:

- Continue with HSFO and use scrubbers in order to meet the new SOx emission controls.
- Use new fuel blends of less than 0.5% sulfur content.

At the moment it seems that scrubber installation has found favor among owners of very large container vessels, bulk carriers and tankers, where bunkering locations are predictable and owners or charterers should be able to recoup the cost due to greater daily fuel consumption and an assumed continuing difference in bunker price between HFO and VLSFO.

This also means that a greater number of vessels, overall, will be expected to operate on VLSFO, and at a recent conference there was consensus among representatives of refineries and fuel suppliers that by 1 January 2020 at least some blend of VLSFO would be available at most major bunkering facilities.

Though of course implementation plans, training and risk mitigation must already be in place, I here outline some of the likely challenges, as well as some commonsense steps to avoid serious operational problems.

FUEL BLENDS

Broadly, there are two types of fuel available in the market:

- One has a base of Residual Fuel Oil (RFO) and aims to meet VLSFO specifications by blending with other streams. This fuel is high in aromatics, with viscosity around 150 CST and higher density.
- The other has a distillate fuel base and is blended to meet VLSFO specifications. This fuel is high in paraffins and has viscosity from 40 CST to under 10 CST less, and lower density.

These two fuels have very different characteristics and present serious incompatibility risks.



Capt. Rahul Sachdeva has 23 years of experience in the shipping industry. He has sailed pre-dominantly on different kinds of tanker ships and has been ashore for the past six years, working in different roles within ship management, offshore project management and shipping IT, and has been a Port Captain with Synergy since April 2019.

INCOMPATIBILITY

Conventionally, vessels try to avoid mixing two different stems, though it was generally accepted that a 90 : 10 mix ratio was safe. But this is no longer the case. Innospec conducted stability tests for several hundred VLSFO blends and found that:

- 35% of the fuels failed the test without intermixing;
- 50% failed after intermixing;
- Some samples failed at a 90 : 10 mix ratio

It is widely thought that a fuel with an HFO base would be incompatible with one with a distillate base. So it is advisable to check the difference between viscosities and densities of two stems and take adequate precautions when there is a considerable difference in the figures.

HEATING

Viscosity and other properties may vary greatly from one VLSFO batch to the next. Some distillate fuel blends may not need any heating prior to injection, and overheating may lead to instability due to oxidation. Fuel systems may develop vapor lock when distillate fuel blends are heated.

Vessels should ensure there is no leakage in the steam line valves at tanks and heaters, and that the viscometer is working reliably.

VLSFO from distillate fuels may be high in paraffins, which will form wax at lower temperatures, a process impossible to reverse. This was never a problem with HFO. Vessels could leave tanks cold and usually simply heat them up just before fuel use. So, if distillate blends of VLSFO are to be stored, a reliable heating system is needed, and temperatures must be monitored so tanks are kept at around 10 ° C above the pour point.

STABILITY

Stability of new blend fuels could be a concern, and may be further complicated by factors like storage duration and some degree of mixture in bunker barge or vessel tanks.

So good management must ensure that fuels are consumed in stem order.

CATALYTIC FINES

Though there is no direct correlation between new blends of fuel oils and cat fines, some vessels receiving VLSFO have reported higher than normal levels. The limit for cat fines in supplied fuel is 60 PPM, but engine manufacturers suggest that cat fines at the engine inlet should not exceed 15 ppm, and even then only for a very short time. So, even though fuel oil meets its specification, it may still cause a lot of harm to the engine if cat fines are not reduced through efficient purification and draining of water in the service and settling tanks.



SUMMARY

The following are some of the steps that should be considered for trouble-free engine operation:

- Strip storage tanks completely, in the most favorable trim, to leave a minimum of unpumpable fuel;
- Prepare for bunkering by gathering old fuel so as to leave as many empty tanks as possible for fresh bunkers;
- Avoid mixing of bunkers if at all possible. Greater focus is needed during bunkering to ensure that the samples signed for are the "true representative samples" of the fuel bunkered;
- Plan consumption so that the fuels supplied earlier are consumed first;
- Bunker Delivery Notes must be compared to highlight any difference in density and viscosity between fuels. It may be necessary to use sludge conditioner or even LSMGO between grades with different characteristics;
- Maintain the temperature of VLSFO from distillate blends at about 10 degrees higher than the pour point;
- Ensure proper operation of storage tank heating coils and have a reliable means of keeping track of storage tank temperatures;
- Conduct onboard compatibility tests between two batches before changing over. This can be done either by a filter paper test or by mixing samples in glass containers, in ratios like 90 : 10 and 50 : 50, and setting them aside for observation;
- Depending on the fuel oil system configuration, avoid as far as possible intermixing different batches in the service and settling tanks;
- If tests indicate incompatibility, it may be necessary to use sludge conditioner in the service and settling tanks. Alternatively, some LSMGO might be added, between the two batches;
- Maintain high purification efficiency by keeping to a temperature of 98 deg C and running at minimum throughput, with an optimum desludging cycle for eliminating cat fines as far as possible;
- Land before and after purifier and engine inlet fuel samples at scheduled intervals to ensure that the purifiers are operating efficiently and cat fines levels are well under control;
- Fuel systems should be well maintained, to prevent leakage when using low viscosity fuel oils;
- Viscometers should be working efficiently. When using the temperature control method, take care not to overheat and thus avoid problems due to vapor production;
- Combustion characteristics may differ greatly, so it may be advisable to change over to a new fuel batch soon after receiving test results and run on the new fuel for a couple of days, hopefully to ensure that there are no engine problems. This might prevent a vessel being stranded without ME power after first wholly consuming a proven stem and then discovering that a new batch is problematic;
- Owing to lower sulfur content, the cylinder oil feed rate should be suitably lowered and scrape down oil analysis conducted regularly, to prevent problems due to excessive alkalinity in the combustion spaces.



Mr. Sanjiv Mishra heads the Ship Management Division of the Synergy Group. He is a marine engineer with over three decades of experience. He firmly believes that if one takes care of small details, the big picture will fall into place. His focus has always been on improving quality and efficiency and he plays a vital role in training superintendents and managers in all aspects of ship management.



Capt. Madhu represents Synergy at Sweden's Linnaeus University

Capt. Madhu V, Director, Synergy Commercial and N2 Tankers, was recently invited to speak at the prestigious Kalmar Maritime Academy.

Established back in 1842 and now with 2,000 employees and over 31,000 students (including some 1,600 from overseas), the Kalmar campus is part of Linnaeus University, a modern, international facility and named after the famous botanist Carl Linnaeus.

The focus of maritime science research there is sustainable and safe shipping within a good working environment. Capt. Madhu was perhaps the first Asian guest speaker, and addressed a study group pursuing a Class 1 Master Mariner Certificate of Competency, covering a variety of topics that included the role of technology in navigation, commercial management and competitive chartering.

In the afternoon session Capt. Madhu discussed gender equality through empowering women in the maritime community, emphasising how Synergy is working towards the UN Sustainable Development Goals, in particular Goal 5 on gender equality, while noting that Asian patriarchal values and social norms still offer many challenges. He spoke of Synergy being the first major ship management company with a woman in command of an ocean-going Aframax.

Proud to be Synergian



Name: Daisy L. Cruz
Designation: Flag Officer
Time with Synergy : 3.5 years
Location: Manila

It is such a blessing to be part of a company which has people's growth and safety so firmly at heart. One seldom finds such a caring workplace nowadays, but such is life here at Synergy, where there is equality, trust, empathy and a visible consideration for each of us as a family unit, and that motivates us to do more than just succeed in our individual ways. It has been more than three years since I started here as a flag coordinator, and through the years I have become part of a great team. I am wholeheartedly thankful, especially to the seniors here for giving me the opportunity to be the best version of myself as an employee, and for letting me achieve beyond my own expectations. I am grateful to have this amazing team around me, and frankly enjoy the kudos that it brings. I am a certified proud Synergian!



Name: Kanika Narang
Designation: Manning Executive
Time with Synergy : 4 years
Location: Delhi

I joined Synergy four years ago. It was my first job, so I was a complete freshman in the company as well as in this sector. I thought it might be hard to attain the standards of more experienced people, but I learnt quickly because of my manager (Capt. Nalwa), the team around me and my dear colleagues who have helped me to adapt to a new culture and to grow faster. Because of everyone's strong support, cooperation, motivation and trust, I have been successful so far and certainly see myself growing in the organisation. The company gives me opportunities to attend seminars at various locations, which makes me more confident in interacting with people from different areas. I am very happy with Synergy's culture, part of which is learning a lot, building confidence and having good relations with colleagues and counterparties.



C A Johnbin Thomas

Name: C A Johnbin Thomas
Designation: Manager, Accounts and Finance
Time with Synergy : 5 years
Location: Cochin

It has been five years with Synergy now. Looking back, I have realised that this time has been filled with learning and growing within the organisation, surrounded by great individuals who have contributed in different ways throughout my continuing journey. I have been fortunate enough to have a wonderful management team, who have been very supportive and encouraging. Respect, care and excellence are qualities that come from the top and flow throughout the rest of the company. I hope and certainly expect that Synergy as a whole will reach its full potential and am really proud to be part of the Synergy family.



Deepak Shinde

Name: Deepak Shinde
Designation: Chief Engineer
Time with Synergy : 5 years
Location: Chennai

I joined Synergy Group in early 2015 as a Chief Engineer and was part of the team that took over its first Fairchem vessel, the "FAIRCHEM CUTLASS". I fondly remember my first visit to the office in Chennai. In all my years of sailing, and with various ship management companies, I have never felt so welcomed and at home - maybe it's just the positivity that the place and people exude. Since that very moment I have been, and have always felt, a part of the Synergy Group, not just as ship staff, but as a family member! I have since been a part of the Fairfield Chemical Carriers' fleet, and in another assignment was a member of the takeover team of the "FAIRCHEM LOYALTY". In five years I have seen Synergy go from strength to strength under the visionary leadership of Captain Unni, and I take immense pride in every achievement of the Group! The best part is that I feel like a much valued part of the success.
 Long live Synergy!



Meenal M

Name: Meenal M
Designation: Assistant Manager, Marine (Tanker Operations)
Time with Synergy: 8 years
Location: Chennai

I joined Synergy in 2012. I was totally new to the marine industry. Senior managers have been so supportive, helpful and approachable at all times, and I have gained such very good knowledge and experience here. It is really a wonderful journey. Safety, supportive culture, guidance and a friendly atmosphere are part of Synergy's assets, and I feel proud to be a Synergian.



Rimpi Kaur

Name: Rimpi Kaur
Designation: Crewing Executive
Time with Synergy : 3 years
Location: Mumbai

I joined Synergy in 2017. In the last three years I have been fortunate in being part of the Cadets Recruitment & Training, and now the Ratings Recruitment Team, with wonderful opportunities in teams involved in cadet selection tests, seminars and outbound learning programs. Three years of varied experience in crewing activities have enriched my knowledge and skills. I look forward to being in the office every day because I am appreciated and able to maximise my talents while learning new skills. The collective belief in "iSTEER Synergy" values nurtures a happy environment where my workplace is a home away from home. I am very fortunate and feel blessed to be working at Synergy. I am a proud Synergian.



Names of the team members:
(Standing from left to right)
Anu K, Vijayalakshmi G, Lakshmi Narayanan K, Capt. Omprakash L, Rajnish Choubey, Yugesh Madhavan, Manikandan P, Karthick Jayakumar

Chennai EMS Team Introduction

Synergy's Environmental Management System (EMS) division is committed to zero tolerance on non-compliance with any requirement as regards environmental protection.

In consultation with all stakeholders, the EMS division establishes procedures to minimise all kinds of waste, whether onboard or ashore and to control all matters with potential for environmental damage. It also sets and monitors processes to help control all types of discharge from vessels, to guard against marine pollution and other adverse impacts on the environment.

This is further helped by promoting awareness on:

- regulatory requirements on environmental protection;
- amendments to MARPOL and any local regulations;
- any applicable standards on energy efficiency

EMS works towards making sure that both ship and shore staff are continually up to date with its standards, by monitoring vessels' data using the ship management software ShipPalm, conducting regular audits and initiating any required Management of Change upon any new implementation.

It also monitors PSC, FSI, SIRE and other inspection reports and suggests any appropriate corrective action, and advises on new technology or procedures for optimal energy management.

EMS Team Structure

NAME	DESIGNATION
Capt. Omprakash L	EMS Manager/ECO
Rajnish Choubey	EMS Superintendent
Manikandan P	EMS Executive
Yugesh Madhavan	EMS Executive
Lakshmi Narayanan K	EMS Executive
Karthick Jayakumar	EMS Executive
Vijayalakshmi G	EMS Executive
Anu K	EMS Executive

“Synergy’s Environmental Management System (EMS) division is committed to zero tolerance on non-compliance with any requirement as regards environmental protection.”

My rendezvous with the "FAIRCHEM VICTORY"



My name is Dulin Mark Fernandes. My husband Mark is a true-blue seafarer whose passion for ships and sailing is not confined to his tenures on board. For example, over the years he has turned our house into a mini museum of marine artefacts. I am glad that Mumbai real estate prices will probably mean that he can't get a real ship anchor home!

However, in all the years of our marriage I never got the opportunity to visit a ship, mainly because I am a working professional. But the tales Mark told intrigued me. The fondness and respect with which he spoke about his shipboard and shore-based colleagues added to that, and I found myself thinking about how what was plainly great camaraderie could be established in just a few months.

I eventually got the chance to sail on the "FAIRCHEM VICTORY", which was in fact the first ship our two little girls and I had seen, in real life, and it was simply love at first sight. We sailed from Houston to New Orleans, Durban and Richards Bay and then our final destination, Singapore. What a magnificent journey it had been!

We saw dolphins alongside the ship and gorgeous flying-fish landing on the deck, and finally a beautiful whale that seemed to be telling us that, regrettably, it was time to return home, but not before we had seen (I am not exaggerating) five rainbows in one day.

Our girls Deandra (5) and Megan (3) also had an exhilarating time. Their curious minds were continuously at work, eagerly asking questions, and maybe they are already tending towards this as a career choice. While transiting the Mississippi we had a chance to sail under a bridge, which was an opportunity for pictures that was simply too good to miss. Then, about a week into the voyage, the crew revived the age-old tradition of the Equator line-crossing ceremony, awakening "King Neptune" and his fine-looking wife. After these absolutely hilarious proceedings, all first time Equator-crossers (which of course included me and our girls) were granted a multiple-entry visa to cross the Equator and enjoy the marvels of both Hemispheres, for which we offer thanks to "King Neptune" for finding us loyal enough to deserve that. It is indeed our pleasure!

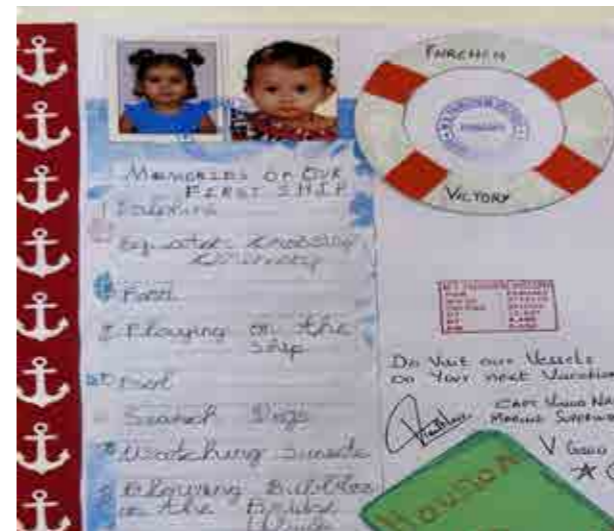


During the long voyage from New Orleans to Durban, the god of the sea gave us excellent weather, so it seems he was pleased with us, as the records suggest that good weather during this voyage is rare. Also, the god of the sky presented us with breathtaking sunrises and sunsets - the best views I could ask for with my morning and evening coffees. The majestic seas, with the roaring waves crashing onto the bow of the ship, was for me a sight to behold each day. I could not get enough of that view, and it is one of many things that I will surely miss and treasure when I get back home.

From Durban, we had the pleasure of sailing with Marine Superintendent Capt. Vinod Nair, who patiently answered the girls' questions. He also got them to write a brief experience of their voyage, which he then kindly stamped and signed as a souvenir for them. We sailed with a great set of officers and crew, who were warm and friendly to all of us throughout. It is hard to pick out individuals in such a fine company, but special mention goes to Chief Engineer Dhiraj C.C, Chief Officer Rohit Sharma, Second Officer Manas Rai and Third Officer Vishal Sahebkar for creating such a friendly ambience and for all of the many kind moments shared.

We are so very grateful to Synergy and the Manning Team for going that extra mile in making our transit a comfortable, easy and wholly enjoyable one!

Dulin Mark Fernandes, wife of Capt. Mark Fernandes, MT "FAIRCHEM VICTORY".



Promotions List

Congratulations & Best Wishes to the recently promoted Sailing Staff mentioned below

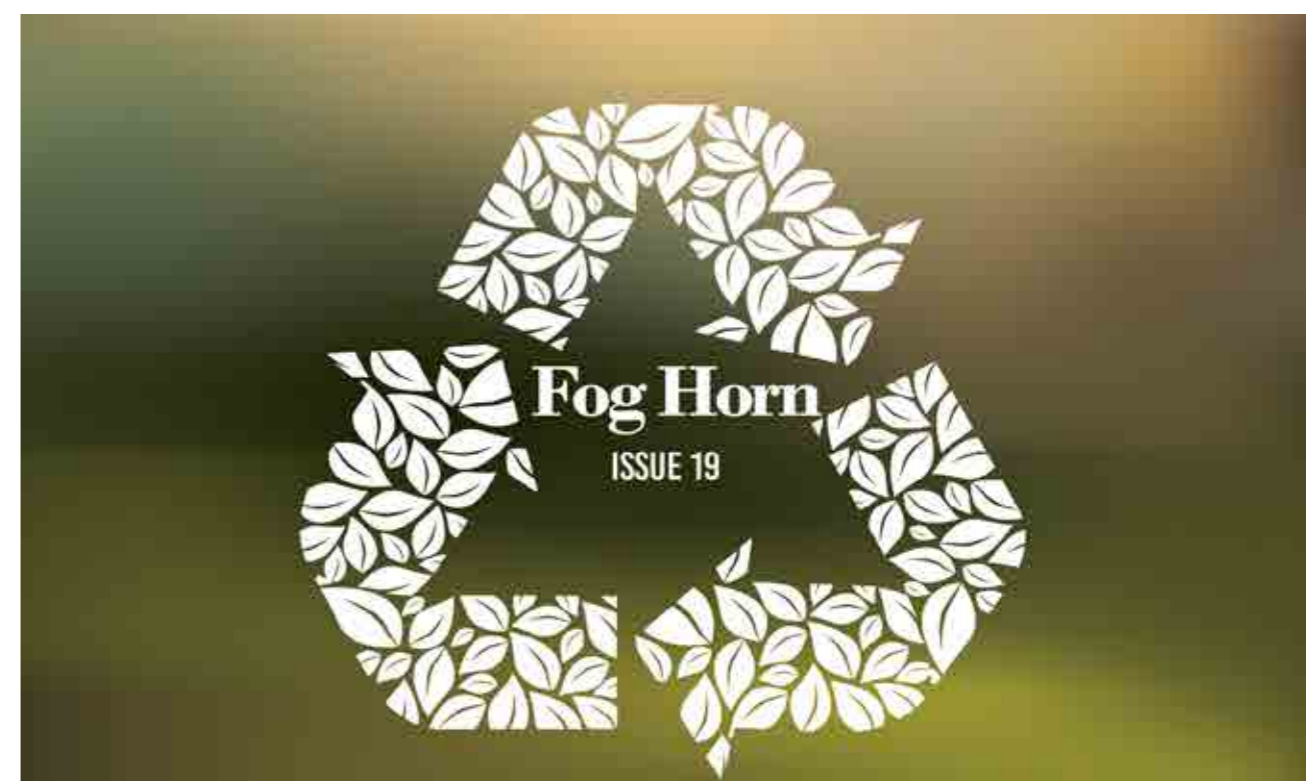
Seafarer Name	To Rank
Leslie Dias	Master
Jasdev Singh	Master
Dhananjayan Suresh	Master
Hareesh Brarath Balasubramanian	Master
Mangal Tiwari	Master
Parthiban Sammandan	Master
Akshay Sharma	Master
Prashant Widhani	Chief Engineer
Lennie Rui Mascarenhas	Chief Engineer
Joy Stephen	Chief Engineer
Rajesh Betha	Chief Engineer
Vijay Padinjare Muttiyil	Chief Engineer
Amratlal Panwar	Chief Engineer
Abhishek Singh	Chief Officer
Yokesh Jayaraj	Chief Officer
Sannu Mathew	Chief Officer
Vijay John	Chief Officer
Ahmed Akhtar	Chief Officer
Abhishek Nakkonda Umakanthan	Second Engineer
Sureshkumar Kancharapu	Second Engineer
Gopinath Veeraraghavan	Second Engineer
Pradeep Singh	Second Engineer
Dilbagh Singh Manhas	Second Engineer
Vinoth Kumar Palanivel	Second Engineer

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