News Waves

Apr - Jun 2020 Edition 2020-2

ROXANA SHIPPING S.A. KRISTEN MARINE S.A.

Contents

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Please recycle

"Humans err, Humans want to do a good job and care for me means care for my team. Then we came to understand that a Fair and Just culture adopting these principles has to be a No Blame culture, and this is the sense of an open and fearless organization. We will restlessly continue working for sustaining the culture of an open and fearless organization, where all of us will be comfortable, with no fear to make known what we think as wrong or propose something new"

It was the end of last year that the idea came up to proceed with an e-version of NewsWaves in between the printed versions and increase the number of NewsWaves editions from 3 to four annually.

And here we are with the 1st e-version of NewsWaves, which is of course posted on Company's web site also.

With covid19 been under control in Athens we decided to conduct our Management Review as usuall consisting of three days in Negroponte resort in Evia. The strict implementation of covid19 measures, personal hygiene as per our covid19 management plan, and hotel, as per Hellenic government requirements, did not spoil our good and constructive mood, to review our success and failures since last Management review of Nov19. The last day was devoted to the Communications for success workshop, there we had the opportunity to elaborate on the three principles: Humans err, Humans want to do a good job and care for me means care for my team, Then we came to understand that a Fair and Just culture adopting these principles has to be a No Blame culture, and this is the sense of an open and fearless organization.

We will restlessly continue working for sustaining the culture of an open and fearless organization, where all of us will be comfortable, with no fear to make known what we think as wrong or propose something new.

Since the late 2016, along with the Shell Partners in Safety and OCIMF / Intertanko working group on behavioral competence, we have been working introducing into our system and practices the soft skills dimension of competence.

The "ego" tree was developed, starting with the principal question, "who is the most important person on earth", and when we came to understand that each one "me" is the most important person on earth, we naturally concluded that each one of us must take care of oneself. The principal order "Return Home Healthy" was then introduced. Elaborating on taking care of myself, and when in team, we came to the equation take care of myself=take care of my team.

The S.H.E.L.L model was incorporated in our system that time to classify the factors each individual interfaces with, ie Software (procedures, instructions), Hardware (equipment, tools), Environment (time and space) and other human beings.

Starting from the Roxana "ego" tree concept we have concentrated on three axes of activity: the 3 pillars (CPAR, MoC and RM) and engagement, the soft skills and the reflective learning.

More than 15 workshops ashore have been designed to elaborate particularly on the principles of:

- Incorporating soft skills, the three pillars and the non routine operations to Company procedures

- take care of myself (and my team) and communication for care and resilience

- communication skills, as prerequisite for a successful leader and a successful team member.

- The Roxana 3x3x3 soft skills model

A remarkable number of projects are running in parallel to manage all changes necessary for our Company to achieve these short and long term objectives. Ships are included as project team members, and even if not, the Follow Up Notification (FUN) sent out to the Fleet facilitates crew engagement to all our projects.

Covid19 outbreak is unfortunately not managed yet worldwide, therefore crew changes are still a big challenge for the shipping industry. The United Nations bodies, namely the International Labour Organization (ILO) and the International Maritime Organization (IMO), along with the European Commission, have stated that Seafarers should be officially recognized as key workers and granted exemptions from travel restrictions so they can join and leave their ships and return home without impediment, while complying with infection control. Despite that the travel restrictions between state borders and the limited flights availability are making crew changes a mission impossible. We heartedly thank our seafarers ashore for their patience and we are supporting them while waiting for signing on for more than 3 months. We also grateful to our seafarers on board for the patience and we are close to them while waiting to sign off.

Crew welfare and mental health is a big priority for us, with BMI and Internet on board two of the related projects, which are now completed in the monitoring phase.

During Feb20 the 3rd party audits for ISM/ISPS and ISO were successfully concluded. This time we added ISO27001, Information security to the standards we are committed to. Roxana and Kristen are two of the handful of shipmanagment companies certified for ISO27001, an evidence of the Company focus to Information security and Cyber security as a consequence. We are happy to confirm once more the steady course of the Fleet and the Company towards high levels of performance. Furthermore during this period we achieved certification as per EU MRV and IMO DCS. Clear evidence of this commitment to excellence in terms of safety, environment protection and quality for this period is the KPIs where most of the targets were achieved, even exceeded. Extract of all above is included in the Hot Stuff section. The New Rules section contains updates on SOx and NOx emissions, Chinese ECAs and fuel 2020 update.

Update on the newbuildings and new acquisitions program is reported in New Ladies on the block section.

The Lessons Learnt section continues to remind us wrong practices that we should refrain from.

All of us should study carefully what we should by all means avoid doing.

Prompt and effective learning process facilitates career development for our employees and ensures the smooth and effective implementation of changes in behavior and operations required due to the fast changing Industry environment.

In line with this policy extended shore familiarization with occasional employment in Head Office is offered to selected officers. Details on the above, along with the records of promotions throughout the fleet, are addressed in the Human Resources section.

Other interesting topics are addressed in the remaining sections of this edition.

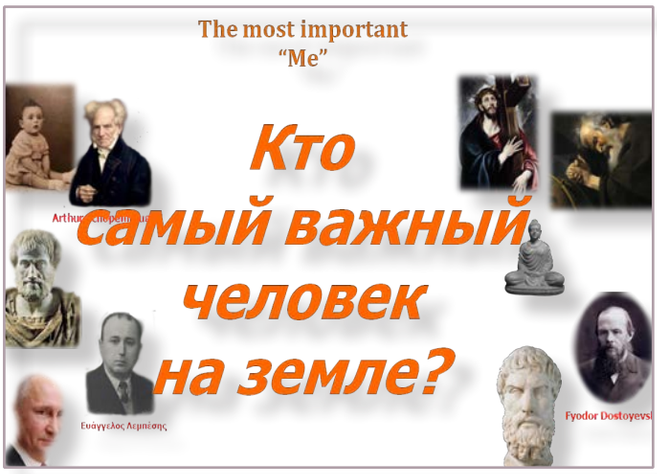
Enjoy the reading!

Takis E. Koutris

Managing Director

Roxana the "ego" tree

Inspired by the Partners in Safety project each one of us elaborated on a basic question who is the most important person for me on earth.



The embarrassment, even blame of "egoism", was a drawback in getting to the obvious answer.

The assistance from our God came the right moment to show us show us the obvious answer:

I am the most important person of earth

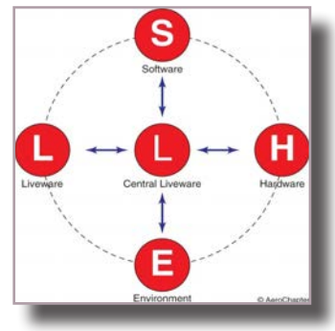
Based on this conclusion the principal order was introduced:

Return Home always Healthy!

God by instructing us to love our neighbor as we love ourselves also guided us to the next conclusion that care about myself means care about my team.

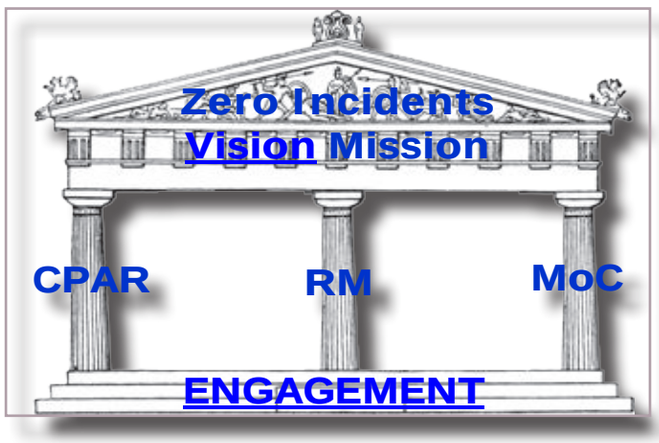
If I care about myself I should care about my team so that all of us return home healthy.

Roxana the "ego" tree (Continued)



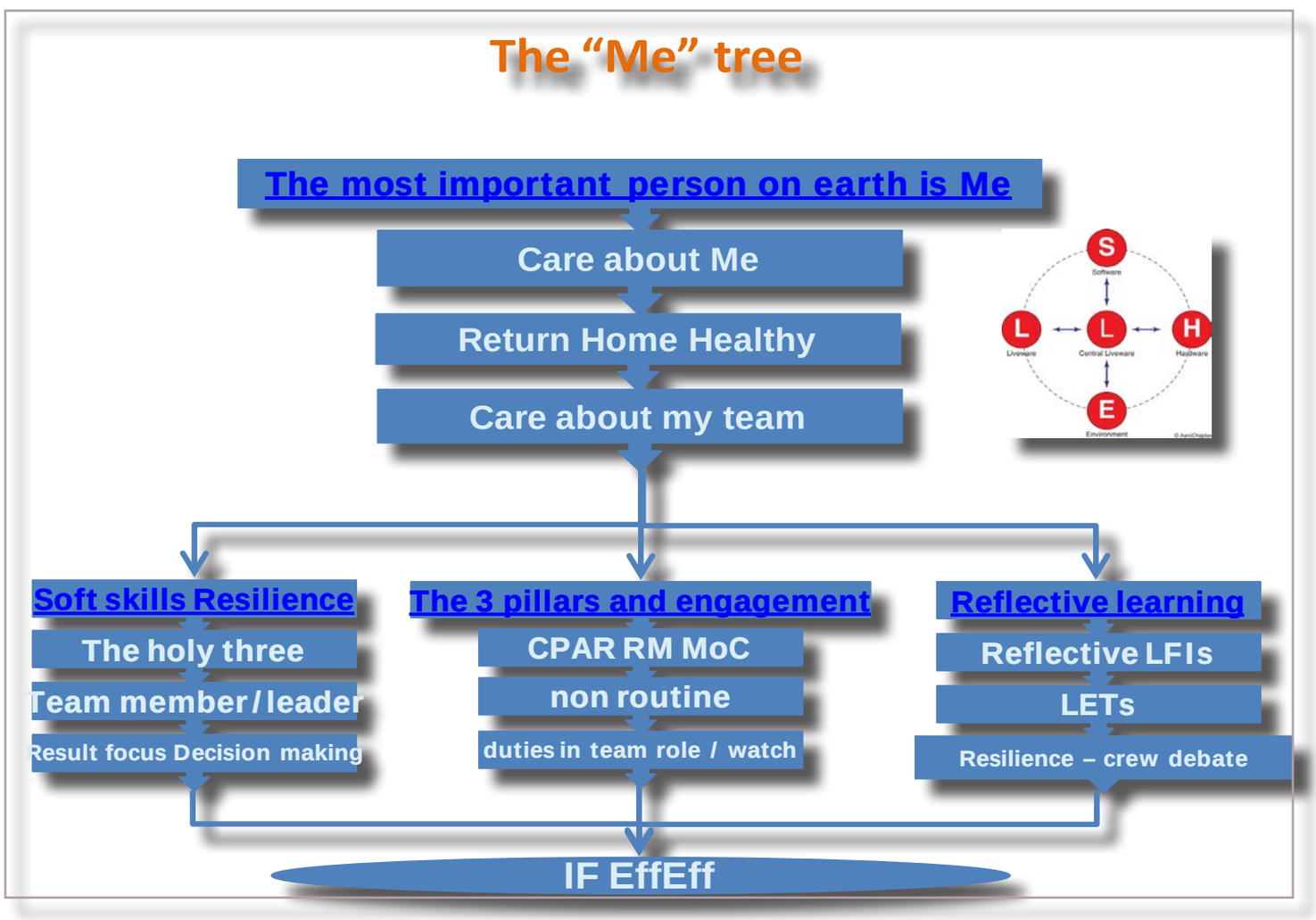
The **SHELL** model was introduced in our system at the same period to facilitate our understanding and classifying of the factors we are in interface with, ie Software (procedures, instructions) hardware (equipment, systems, tools) environment (time and space) and Liveware (human factor).

Human centric Applicable to: Soft skills and Resilience, Investigation (classifying factors), **Causation analysis** (classifying causes), **Risk Management** (classifying hazards and threats)



Soft skills introduction and the Roxana 3x3x3 soft skills model, the 3 pillars and engagement and reflective learning (particularly on Communication for Resilience and IF EffEff operations), and why success for us is IF EffEff are addressed in separate articles in this magazine.

The "Me" tree



Roxana the 3 pillars and engagement

OCIMF TMSA3 has been released Jul17. Late 2017 we introduced the three pillars and engagement principle, as the backbone of our

system development to meet our Zero Incidents target, in compliance with our IDEA Vision and Mission.

The three pillars were identified as

- **CPAR:** procedure CP08 Control of Non-Conformities, Accidents & Near Misses
- **RM:** procedure CP24 Risk Management
- **MoC:** procedure CP13 Management of Change

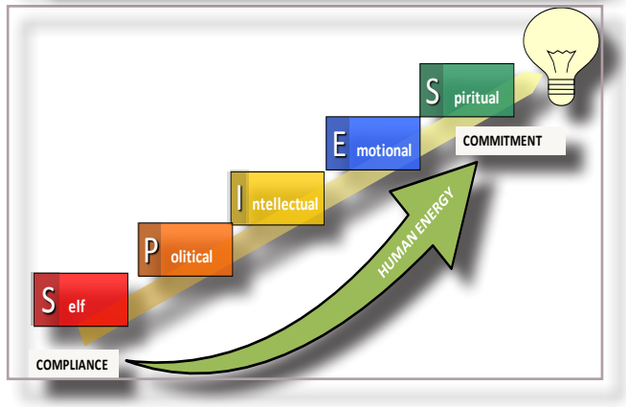
Engagement was introduced and the foundation in this process, as the ticket to shift mere compliance to commitment, as a ticket to Company culture.

Inspired by the TMSA3 release we have mandated, when applicable and if practical in all critical operations separate paragraphs for the three pillars (incident reporting-investigation-root cause analysis-CPARS, RM and MoC), reflective learning and training, non routine operations.

We all know, normal conditions are not always the case and therefore, we have to be prepared to operate also under "not normal" conditions, so called non routine operations.

A project has been initiated since 2018 and workshops already conducted to identify such scenarios which SQM have made now available in the consolidated non routine operating scenarios and which will populate the separate per procedure paragraph on non routine operations.

Procedures format, as documented in CMSM ch3, is revised to reflect the above.



Herakleitos teams with Dostoyevskiy to make 2+2=5

Dostoyevskiy's hero in the *"Notes from the Underground"* is for 4 pages struggling in despair denying to accept the mathematical certainty 2+2=4, concluding in excitement that 2+2=5 is sometimes a very charmimg thing.

Ch IX.....
But yet mathematical certainty is after all, something insufferable. Twice two makes four seems to me simply a piece of insolence. Twice two makes four is a pert coxcomb who stands with arms akimbo barring your path and spitting. I admit that twice two makes four is an excellent thing, but if we are to give everything its due, twice two makes five is sometimes a very charming thing too.....

Записки из подполья, Глава IX
Но дважды два четыре — все-таки вещь пренесносная. Дважды два четыре — ведь это, по моему мнению, только нахальство-с. Дважды два четыре смотрит фертом, стоит поперек вашей дороги руки в боки и плюется. Я согласен, что дважды два четыре — превосходная вещь; но если уже все хвалить, то и дважды два пять — премилая иногда вещица.

«... οὐ ταὐτόν ἐστι τὰ μέρη καὶ τὸ ὅλον ...»(150a15-16).

"the whole is not the same as its parts"

2000 year before Dostoyevskiy a pure mathematical paradox was quoted

The whole IS NOT the same as its parts, may be smaller or bigger than the addition of its parts!

It was 2500 years before Dostoyevkiy's wish for 2+2=5 that one of the Humanity's greatest genius, Herakleitos, identified the added value of harmonizing the opposites, the *dialectic* value, which is included in our Company's Vision.

8. «...το αντιξοον συμφερον και εκ των διαφεροντων καλλίστην αρμονιαν ...και παντα κατ' εριν γινεσθαι...»
The opposites are beneficial and from the Different the best harmony... Everything is developed in dispute...

A team:

- having team members gifted with teamworking skills
- having a leader gifted with leadership and managerial skills will produce the added value

will make the 2+2=5 possible
will keep Dostoyevskiy satisfied!

The 2+2=5 concept was developed while elaborating on the TeamWorking soft skills and facilitated our understanding of the added value of a team where differences are harmonized.

The teams concept is introduced

- **There is no operation or even task on board or ashore that can be completed Incident Free, Effectively and Efficiently by one individual alone.**
- **There is no individual who can complete alone any operation ashore or on board Incident Free, Effectively and Efficiently.**

Roxana and the SHELL model

The SHELL model was first developed for the aviation by Elwyn Edwards (1972) and later modified into a 'building block' structure by Frank Hawkins (1984). The model is named after the initial letters of its components (software, hardware, environment, liveware) and places emphasis on the human being and human interfaces with other components of the aviation system.

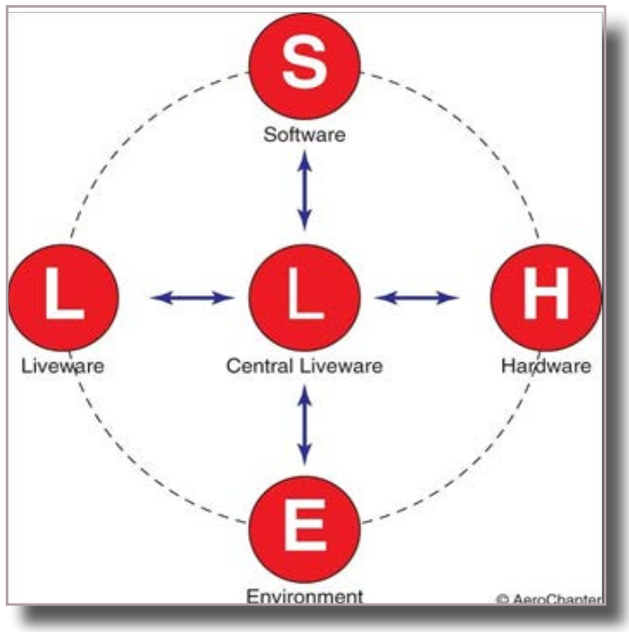
The SHELL model is a conceptual model of human factors that clarifies the scope of aviation human factors and assists in understanding the human factor relationships between aviation system resources / environment (the flying subsystem) and the human component in the aviation system (the human subsystem).

The SHELL model adopts a systems perspective that suggests the human is rarely, if ever, the sole cause of an accident. The systems perspective considers a variety of contextual and task-related factors that interact with the human operator within the aviation system to affect operator performance. As a result, the SHELL model considers both active and latent failures in the aviation system.

The anthropocentric principle of the Shell model pretty much fits into the Company commitment to place and engage the human in the centre of activities.

The SHELL model is adapted to the Company DMS CMSM par3.5, and SHELL factors are extensively used when applying processes, amongst others, like the:

- interview
- investigation
- causation analysis
- hazards and threats identification



The holy three and Roxana 3x3x3 soft skills model

OCIMF ITK Behavioral Competency Assessment and Verification for Vessel Operators was released in Nov18, introducing the 6 soft skills domains in conducting HSQE incident free operations, effectively and efficiently, IF EffEff, namely Teamworking, Communication and influencing, Situation awareness , Decision making, result focus and Leadership and managerial.

During the relevant workshops in 2018 and 2019 we considered the *holy three concept*:

- the simpler the process the more engaging for the stakeholders it is
- the human brain is geared to think the dialectic way, 3 issues at a time
- key findings of recent Harvard university studies (N. Cowan -2010) suggests the limit of working memory capacity between 3 and 5 chunks of information.

During the previous workshops as above par2 we realized that:

- Teamworking, Leadership and managerial, Communication and influencing soft skills sets are meaningful only in a team environment (interpersonal skills)
- Decision making, result focus, Situation awareness soft skills sets apply for an individual, even not within a team (intrapersonal skills)
- Communication skills are prerequisites for Teamwork and for Leadership skills
- Situation awareness is prerequisite to proper Decision making and result focus skills

Considering the above we decided to modify the 6 soft skill domains to 3, by:

- Fusing communication and influencing to team working and leadership/managerial
- Fusing situation awareness to decision making and result focus
- Merging decision making and result focus

The holy three and Roxana 3x3x3 soft skills model (Continued)

Ending up to *3 soft skills sets*

- Team working
- Leadership and managerial
- Decision making and Result focus

We further considered 3 categories to each of the 3 soft skills domains and three sets of behavioral indicators per category, as per Roxana's 3x3x3 soft skills model following next.

The next step is to complete the education of our assessors and incorporate the Roxana 3x3x3 soft skills model into the recruitment and appraisal procedure.

1. Team Working	
Works effectively in a team, clearly and precisely and gives and receives communication in a convincing manner to both, groups as well as individuals at all levels, including senior/line managers, colleagues and subordinates, building productive working relationships through cooperation with colleagues, treating others with respect, facilitates resolving conflicts among team members and balancing individual and team goals, interacting with others in a sensitive and effective way in a risk- and time-sensitive environment.	
1.1. Participation and supporting others	
1.1.1.	**Actively participates in team tasks:** - Helps other crew members in demanding situations - Actively seeks and acts upon feedback.
1.1.2.	**Establishes an atmosphere for open communication and participation**: - Clearly puts forward views and personal position while listening to others. - Encourages input and feedback from others. - Builds rapport and establishes a common bond with others. - Encourages idea generation. - Shares expertise with others.
1.1.3.	Communicates effectively - Uses the right mode, time and medium to deliver the message (spoken, written, body signals, sentence structure, terminology and speed of delivery etc) to suit the message and the intended recipients. - Clearly discusses plans, expectations and roles with each fellow team member, ensuring that all understand them the same way - The amount of communication is appropriate and clear for the situation in hand.
1.2. Inclusiveness and consideration of others	
1.2.1.	Helps people feel valued and appreciated. - Welcomes and includes others - Receives feedback constructively and acts accordingly. - Notices the suggestions of other crewmembers. - Gives clear, detailed and constructive personal feedback. - Gives clear and concise briefings and updates at appropriate times.
1.2.2.	Demonstrates respect for people and their differences. - Shows understanding of others' perspectives and personal situations. - Acknowledges cultural diversity when communicating.
1.2.3.	Communicates in a way that elicits appropriate action from others. - Asks questions and observes others to confirm their common understanding
1.3. Conflict resolution	
1.3.1.	Keeps calm in conflicts and suggests solutions to resolve conflicts.
1.3.2.	Receives feedback constructively and expresses disagreement constructively by giving alternative or different perspectives.
1.3.3.	Influences others resulting in acceptance, agreement and/or behaviour change.

The holy three and Roxana 3x3x3 soft skills model (Continued)

2. Leadership and Managerial skills	
Clearly and precisely gives and receives communication in a convincing manner to both, groups as well as individuals at all levels, Inspiring, motivating and empowering his colleagues to perform at their best to achieve goals. Adjusts leadership style to situations, including those which develop suddenly and change rapidly, Interacting with others in a sensitive and effective way in a risk and time-sensitive environment.	
2.1. Setting directions, providing and maintaining standards	
2.1.1.	Communicates clear expectations. - Considers the bigger picture and longer term needs prior committing to a course of action. - Translates the vision into clear strategies and work programmes. - Uses the right medium to deliver the message (face-to-face, radio, email, telephone, etc). - Uses language appropriately (e.g. in sentence structure, terminology and speed of delivery). - Uses a range of communication methods (e.g. spoken, written, hand signals, etc) to suit the message and the intended recipients. - The amount of communication is appropriate and clear for the situation in hand. - Communicates in a way that elicits appropriate action from others.
2.1.2.	Demonstrates commitment to Company values, ethical and moral standards, setting a personal example of what is expected from others.
2.1.3.	Ensures compliance with Company system and standards and intervenes in case of deviations by other crew members
2.2. Authority, assertiveness and empowerment	
2.2.1.	Creates a culture that enables challenge and participation of crew members while maintaining the given command authority - Encourages crew members to review, raise concerns or challenge plans of actions. - Creates a safe and trusting environment for crew members of open and frequent communication with clear and direct flow of information, supporting them to openly share lack of knowledge and/or to speak up without hesitation. - Recognises, appreciates, and supports contributions of people. - Receives feedback constructively.
2.2.2.	Takes command if the situation requires. - Takes decisive actions as required. - Advocates own position. - Clearly puts forward views and personal position whilst listening to others. - Influences others resulting in acceptance, agreement and/or behaviour change.
2.2.3.	Supports people to have a level of independence in how they do their work - Develops cooperative and respectful relationships with people. - Understands the needs of crew members and cares about their welfare - Acknowledges cultural diversity when communicating. - Creates a feeling among the crew members of achieving results together as one team - Asks questions and observes others to confirm their understanding. - Actively seeks and acts upon feedback. - Encourages people to acquire new skills and develop themselves.
2.3. Planning, co-ordination and Workload management	
2.3.1.	Organises tasks, activities and resources. - Sets achievable goals, makes concrete plans, and establishes measurable milestones with timescales and quality standards. - Encourages shared understanding and participation among crew members in planning and task completion. - Clearly explains plans, expectations, and roles to each person, ensuring that they understand them - Defines clear roles and responsibilities for crew members for both normal and non-normal situations, including workload assignments. - Prioritises and manages primary and secondary operational tasks. - Distributes tasks appropriately among the crew, balancing the needs of every team member.
2.3.2.	Challenges current processes to find new and innovative ways to improve work of the team and the vessel - Uses appropriate tools and notifications when dealing with non-routine operations. - Uses available external and internal resources (including automation) to accomplish timely task completion.
2.3.3.	Monitors plans for the achievement of targets. - Gives and asks for clear and concise briefings and updates at appropriate times. - Recognises work overload, signs of stress and fatigue in self and others, acting promptly to deal with it. - Delegates in order to achieve top performance and to avoid workload peaks and troughs. - Reviews and communicates plans and intentions clearly to the whole crew, changing plans if necessary. -

The holy three and Roxana 3x3x3 soft skills model (Continued)

3. Decision making and Result focus	
Accurately perceives all SHELL factors on-board, at sea and ashore and projects their status in the future, reaching systematic and rational judgements or chooses an option based on relevant information by analysing issues and by developing effective strategies to manage HSQE threats. Demonstrates a readiness to make decisions and originate action, focusing on achieving desired results and how best to achieve them by taking conscientious action, using initiative, energy and demonstrating flexibility and resilience.	
3.1. Awareness of SHELL factors and their risks for problem definition and options generation	
3.1.1.	Maintains awareness of SHELL factors. - Monitors, cross-checks, acknowledges and reports changes in all SHELL factrors - Gathers information and identifies the problem and its causal factors in the 3 dimensions of time. - Consults and shares information with specialist expertise or local knowledge on all SHELL factors when required, environment included.
3.1.2.	Problem definition - Encourages idea generation and challenges existing norms, accepted risks, processes or measurements - Generates multiple responses to a problem or alternative courses of action.
3.1.3.	Risk assessment for option selection - Uses all available resources to manage threats. - Considers options generated by external advisors (e.g. pilot) and retains decision making responsibility and accountability. - Considers and shares the risks of alternative courses of action. - Anticipates present and future threats and their consequences. - Assesses risks and benefits of different responses to a problem through discussion.
3.2. Outcome implementation and review	
3.2.1.	Selects and implements timely the best response to the problem. - Checks the outcome of a solution against the predefined goal or plan, reviews the quality of the decision made. - Takes timely and mindful actions.
3.2.2.	Confirms selected course of action and implements in a timely manner. - Stays focused on tasks and meets productivity standards, deadlines, and work schedules. - Shows up to work on time, and follows instructions, policies, and procedures. - Goes the "extra mile" beyond job requirements in order to achieve objectives. - Takes personal responsibility for the quality and timeliness of work, and achieves results with little need for supervision.
3.2.3.	Has a sense of urgency about solving problems and getting work done, and pushes self and others to reach milestones. - Effectively manages the time and resources to accomplish tasks, prioritising the most important ones - identifies what needs to be done and initiates appropriate actions - Looks for opportunities to help achieve team objectives.
3.3. Determination and emotional toughness	
3.3.1.	Recovers quickly from setbacks and responds with renewed and increased efforts. - Persists in the face of difficulty, finds alternative ways to complete tasks and goals. - Exerts renewed and increased effort to achieve goals, persisting even in the face of problems. - Handles high workloads, competing demands, vague assignments, interruptions, and distractions with composure. - Willingly puts in extra time and effort in crisis situations. - Stays calm and maintains focus in emergency situations.
3.3.2.	Adapts to changing business needs, conditions, and work responsibilities. - Shows others the benefits of change. - Adapts approach, goals, and methods to achieve solutions and results in a changing environment. - Responds positively to change, embracing new ideas and/or practices to accomplish goals and solve problems.
3.3.3.	Discusses contingency strategies and takes timely and mindful actions. - Acknowledges and corrects mistakes, taking personal responsibility as appropriate. - States alternative courses of action, Implements new ideas, and/or better ways to do things and/or implements potential solutions to problems

Roxana take care of myself and my team

The Partners in Safety Resilience program and modules were introduced in our system and in the Fleet since beginning 2015, introducing the soft skills dimension into the equation for Incident Free, Effective and Efficient operations, IF EffEff.

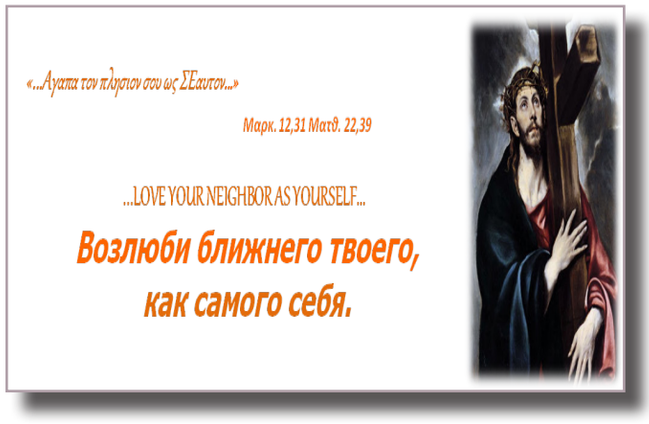
It is important to know what to do, but equally important to know how to do what you know, particularly in a team.

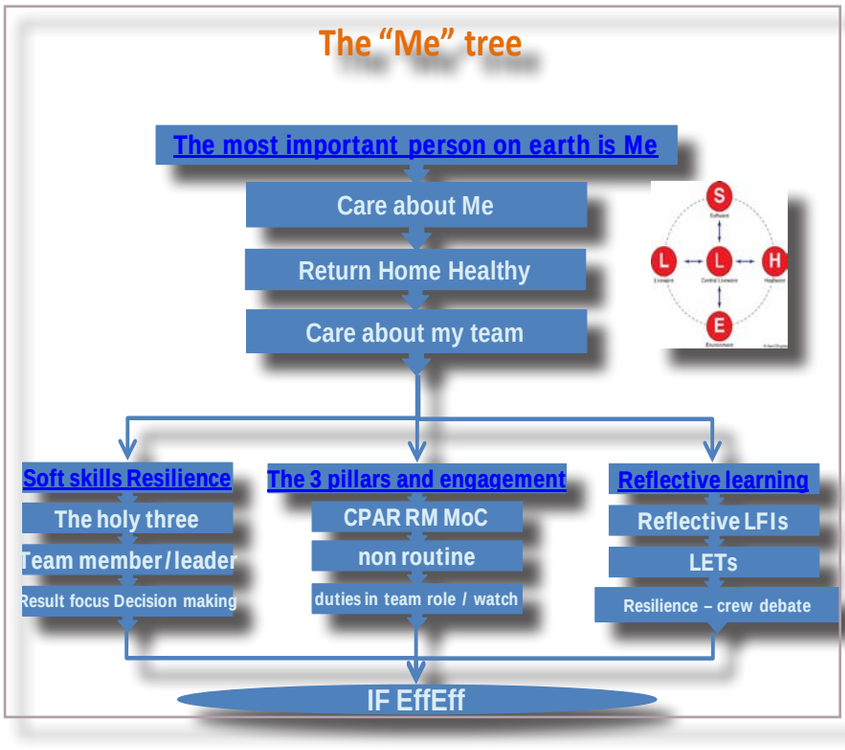
The knowledge of what to do is the hard skill, the hard competence, the how to do (behavior in a team) is the soft skill, the soft competence.

Resilience is the capacity of the individual to overcome and manage the difficulties, the undesired events, the miseries in the everyday life at home and work. It is all about behavioral styles that will improve the ability of the individual to manage the burdens of life.

The "Take care of yourself" Resilience module allows you to reflect on how well you are looking after yourself currently and look at the options available to improve your health and wellbeing. Taking care of oneself, physically and mentally, is important for your safety and the safety of your team. It impacts one's ability to respond quickly and safely when things go wrong.

When in a team taking care of yourself is inevitably requiring to take care of your colleagues as well. The stop work authority and the intervention for safety are addressed in this module.





The "Me" tree, the most important who, the principal order "Return Home Healthy… with full basket", the three pillars and engagement, the PALI poster were gradually introduced since 2016.

We are now aware that engagement is the ticket to culture, is the boosting of chronic unease versus risk normalisation.

The principal order "Return Home Healthy all the times, with full basket" is well engraved into our skin.

This workshop refers to three injuries, three injured colleagues, three LTIs that happened In 2018 and elaborates on what actions we could done as a team to prevent these LTIs from happening.

This workshop boosts the awareness of the value of Taking care of myself through taking care of my team, so that my team operates IF EffEff and all Return Home Healthy!

Roxana Communication for Resilience

While we were elaborating on the soft skills domains we came to understand that Communication and Influencing skills are a pre-requisite quality for a successful team leader or team member.

Back in 2015, during working out the project for Internet on board, the hazards i-Isolation and i-Distraction had been identified. As per attached relevant Risk Management, form CP24-01:

- **i-Isolation** is the hazard related to the situation that individuals isolate themselves and socialise less with their colleagues during their leisure time since they are surfing the Net. Team spirit and thus HSQE effective and efficient incident free operations are in threat.
- **i-Distraction** is the hazard related to neglect of duties due to intense and addictive use of the Internet. HSQE effective and efficient incident free operations are thus at risk.

Workshops have been conducted since 2017 till now to identify measures to reduce the risk of i-Isolation and i-Distraction threats.
All proposals for reducing the risk level of i-Isolation and i-Distraction are compiled by SQM in a document.

i-Illusion is another hazard of the "direct and live" contact with people ashore, beloved or not, through the internet. This type of contact enhances the feeling of distance and absence, that internet is supposed to breach, in cases of problems you are not there to solve or happy events you are not there to enjoy.
This i-Illusion of contact causes a stress that calls for alternate resilient ways to manage.
These issues are addressed in the Partners in Safety Resilience Vol3 Connections to Home Module.

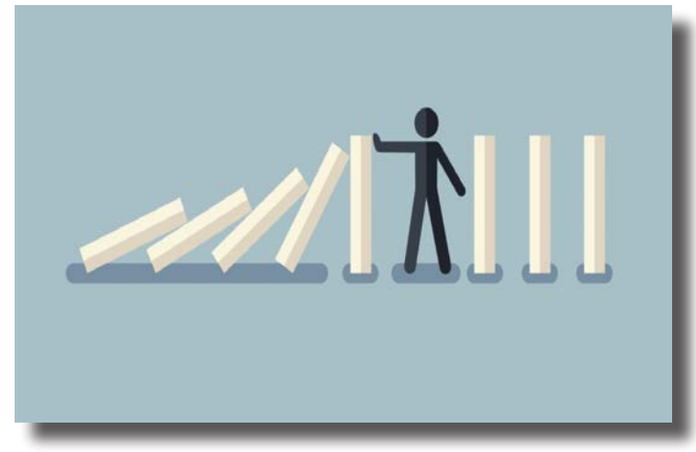
When trying to define the i-Isolation, i-Distraction and i-Illusion threats we came to understand that the stronger the bonds between the team members the easier the above threats are managed.
Do not forget that each "me" is the most important person on earth, so each one of us has to take care of himself, which in a team means he has to take care of his colleagues.

Appreciation and positive communication is two ways to show your care and is the one of strongest glue to bond the team. And a bonded team is a resilient team, operating HSQE incident free, effectively and efficiently IF EffEff!
Is a team which will ensure "Return Home Healthy…with full basket".
Resilience Vol3 Gratitude Module deals with the appreciation, the simple "thank you"

- as an evidence of recognition and appreciation,
- as an evidence of caring about me through caring about my colleagues
- as a magic stick to cultivate the culture of intervention

Resilience Vol3 Positive Communication Module deals with the power of communicating in a clear, positive and constructive manner, focusing in the use of positive expressions "and", "Do", "Go for" instead of 'But", "Don't", "Try"
Based on the above we have designed **the Communication for Resilience workshop**.
This workshop builds upon the 3 Resilience communication modules and elaborates on how to:

- manage i-Isolation, i-Distraction and i-Illusion on board
- express appreciation and gratitude in the every day life in a team
- communicate positively and constructively



In the course of these workshops we justified our objection on the incrimination of the word "but".
We applied our communication policy principle "last token, first taken" and concluded that when connecting two sentences, setting the positive sentence last makes communication positive and the word "but" is quite ok to communicate positively…."old but beautiful"….
This workshop reflects the value of communications skills in improving our resilience as individual and as a team.

Management Review Meeting 2020-01

The Company's first Management Review Meeting for 2020 took place in Eretria at Negroponte Resort on 26-27Jun20, with a broad participation of colleagues from Roxana Shipping S.A and Kristen Marine S.A.

The meeting was conducted in a period that covid19 was under control in Hellas, while all measures for covid19 management, personal as per our covid19 management plan and hotel, as per Hellenic government regulatory regime, were taken to ensure the safe and virus free conduction of the meeting. Present in the Management Review 2019_02 were physically 18 colleagues from Roxana and Kristen, including the chairman of the BoD, Mr. Krontiras, and remotely (videoconference) 4 persons from RoKcs and Pancoast- Singapore offices,.

A lot of interesting issues were raised during this meeting.

Company's IDEA Vision was reviewed, discussed versus the values we want to stand for as an organization and validated, Mission and Policies were once again reviewed and discussed for changes to be implemented with DMS revisions Dec20.

Statistics and benchmarking were presented and discussed by each department, Company's as well as fleet's performances were reviewed, KPIs were reviewed and compared with the target values set.

The new Rules and Regulations that are about to come in force and the existing ones that have been recently introduced, the various projects launched during the last period and the status of the ongoing projects were discussed as well as new buildings and new course of actions was set.

The first day was concluded with the 'Fearless Ego for Success" presentation, where the Roxana Fearless Ego tree was referenced with elaboration on:

- The Roxana fearless ego tree and the three pillars (CPAR, MoC, RM) and engagement
- The human principles and the terms under which the Fair and Just culture must be a No Blame Culture
- The change myself concept and the IF EffEff meaning of success
- The identical concept of Risk management and of Fail Safe and Fail Less
- Soft skills and the Roxana 3x3x3 soft skills model
- Human health, physical and mental, competence and behavior, and how performance is related to them
- Reflective Learning from success and from failures

The event was completed on the second day of the meeting, with a workshop on Communication for success, which was introduced by our Managing Director Takis Koutris, with participants split in 3 groups, facilitated by Nikos Giampanis, TD manager, Liana Kapsali, altDPA and Vassilis Kokkineas Environmental and PMS sup/nt.

It was a very interesting session, providing the reflective learning environment to Roxana and Kristen employees to elaborate as teams and as individuals on issues like:

- To what extend IF EffEff communication and Company communication policy application have improved the last period for each individual
- The pro-active nature of learning from success
- The three human performance principles
- If something is to change first of all, this is ME
- All of us make mistakes
- All of us want to do If EffEff job
- my colleagues error is my error and/or systemic error
- What means Decision Making Result focus for a team member (how a decisions for the team is taken how is implemented, how is revised)
- What means Teamwork (how team member is engaged in a decision is taken and in implementation, how team communicate)
- What means Fair and Just culture for No Blame culture

Boosting the Internet access for our seafarers

Further to our circular ID/CIR-CRW-20-1466_Difficulties on crew changes due to Covid19 pandemic, dated 31Mar20, we would like to thank our sea-going employees on board now for the resilience they have shown for all this period.

We do appreciate the problem caused by the crew changes disruption and in view of this and from May 20 going forward till 31Dec20 the rate Internet access rate will be 0.10 USD/MB instead of the current rate of 0.14 USD/MB.

Having said the above we remind you that Internet bring people together but on the other hand we have elaborated of the i-isolation and i-distraction threats and the commitments following the workshops communication for Resilience and Care and Take care of myself and my team.

After all what matters first is the Health, physical and mental, of all our employees, particularly during this covid19 pandemic.

Covid19 management project 2020-06

Further to our circular outgoing Message 929485 and memo 657214 of 01May20 we remind you that on 30Jan20 the Director-General of the World Health Organization (WHO) declared China's novel coronavirus (2019-nCoV) outbreak a public health emergency of international concern.

In view of the COVID 19 evolution worldwide, in Russia and in Hellas, and in view of the various scenarios worked out by EU, Russian and Hellenic Government, a project is launched on 12Mar20 for introducing a plan to elaborate on what actions could be done to further ensure our smooth HSQE IF EffEff operations in the Covid19 evolution environment.

Actions addressing personal and corporate health issues (active measures), changes in operation to mitigate exposure to virus or spread of virus (passive measures) and recovery plans.

A management of change plan is drafted to ensure our smooth HSQE IF EffEff operations in the Covid19 evolution environment.

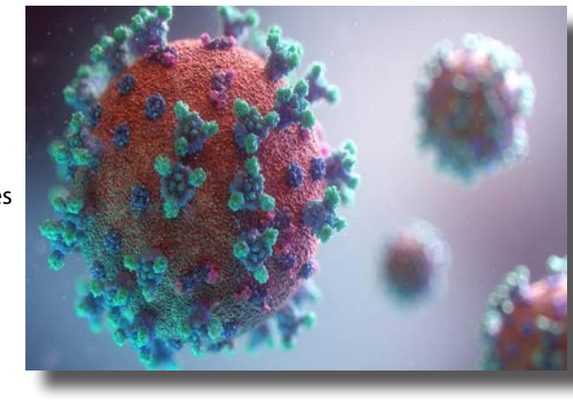
Project team leader is Liana Kapsali (LPK) and project team members are Takis Koutris (TEK), Nikos Giampanis (NG) and Pavel Sidorkin (PS).

Last meeting was conducted 24Jun20 in the presence of LPK, NG, TEK.

Out of this meeting following is reported:

- All members of the expanded Roxana and Kristen family, on board and ashore, are reported virus free.
- All actions from last meeting are completed or transferred for completion in the current meeting report.
- Office attendance in Russia and Hellas returned to normal, subject to personal and social measures as per NPHO, and the situation is monitored for prompt response to any change.

All are prompted to review the plan and contribute with ideas-actions for the successful implementation of the project. To this extent at this phase and with deadline next meeting date 30Jul20 please:



- Master and all crew
- Follow strictly the active and passive measures, as per updated circular
- Follow strictly the Covid19 Management Plan, FOM07 Appendix 10.1
- LPK to:
- Follow up for updates on Awareness on personal hygiene measures and practices and Hygiene measures during transit, for employees ashore and on board
- KNA to:
- Prepare recovery plan for crew changes when airports in Russia and worldwide are open
- THP to:
- Prepare recovery plan for Vetting and ISM/ISO/Flag inspections
- NG to:
- Modify attendance plan and prepare recovery plan for physical ships' attendances (internal and class)
- NG/Gr1-2 to:
- Verify implementation on board, as per Master actions
- Front desk to ensure:
- remote temp screening, disinfection and registration for all incomers

5. Next project team meeting is planned by 30Jul20.

Marshall Islands teams with Roxana for remote surveys

On 24Apr20 a teleconference meeting via Microsoft Teams was conducted, from 12:00 till 13:35

1. Participants:

1.1. IRI
- T. Xenakoudis, Director, Worldwide Business Operations, Managing Director – Piraeus
- T. Lalas, Fleet Operations Manager
- V. Kamitsis, Regional Technical Manager

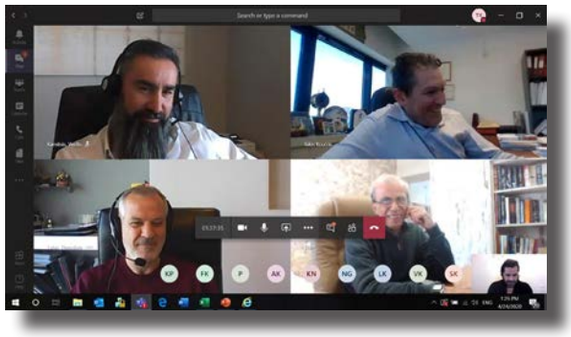
1.2. Roxana Shipping
- T. Koutris, Managing Director
- N. Giampanis, Technical Manager
- K. Anissis, Crew Dpt. Manager, Dpty DPA & Security Officer
- T. Papatheodorou, HSQE Dpt. Manager, DPA & Security Officer
- L. Kapsali, SQM Coordinator
- N. Kasssiteropoulos, Fleet Superitendent
- F. Kousouris, Fleet Superitendent
- V.Kokkineas, DMS Sup/dent, Environmental Officer
- K. Papageorgiou, Technical Coordinator
- S. Kontozoglou, M.I.S. / E.D.P. Manager

1.3. RoKcs
- D. Verkhoturov, General Director
- P. Sidorkin, Senior crew co-ordinator, MR, Training Officer

2. The discussion was based on the agenda items as per relevant previous correspondence, ie

2.1. IRI proposed agenda items
- Quick updates on the IRI fleet and performance
- COVID19 updates and MI response on daily needs and operations
- Roxana fleet overview both in terms of Inspections and Technical status
- Benchmarking of Roxana's Fleet vs RMI fleet

2.2. Roxana proposed agenda items
- remote surveys and audits in the post covid19 1st wave
- certified software for celestial navigation
- BWVAG update



3. The following act as recap of what has been discussed and agreed this time.

3.1. IRI presented as follows:

3.1.1. T. Xenakoudis Updated all on IRI fleet statistics and performance statistics

3.1.2. V. Kamitsis and T. Lalas updated all on
- COVID19 updates and IRI response on to ensure business continuity for its members and Roxana
- Roxana fleet benchmarking in terms of Inspections and Technical status statistics
- Clarifications were provided on various questions on statistics

3.1.3. V. Kamitsis appreciated the smooth IF EffEff co-operation with Roxana, particularly extentions and dispensations

3.1.4. T. Lalas
- appreciated the good performance and overall score of Roxana and Kristen fleets in terms of statistics and vs the IRI fleet statistics
- elaborated on the ATS penalty due to the recent flag inspection and confirmed that this penalty is linked to the last inspection only so can be lifted with next inspection
- expressed his concern for the recent complains on MLC issues
- noted a mistakenly reported CY flag Roxana ship

Marshall Islands teams with Roxana for remote surveys (Continued)

3.1.5. Roxana appreciated the IF EffEff cooperation with IRI in all aspects
- N. Giampanis asked for clarification for a more than 3 months extension on SS or other inspections and V. Kamitsis conformed that this is considered in the covid19 environment
- L. Kapsali presented Roxana statistics, compatible with IRI statistics
- V.Kokkineas presented extensions and dispensation statistics and it was agreed that he will liaise with V. Kamitsis to streamline Roxana KPIs with the IRI ones

3.2. Roxana presented as follows:

3.2.1. T. Koutris elaborated on remote surveys and audits in the post covid19 1st wave era, particularly
- why remote surveys and audits are important
- what Roxana is doing to implement this concept, introduced L. Kapsalias leading the pilot projects with ROs for class and statutory inspections and with IRI for flag inspections and finally presented the deadlines
- If IRI wish and how IRI can contribute to Roxana project

3.2.2. S. Kontozoglou updated all on the steps planned for implementing the required hardware and software on board

3.2.3. T. Xenakoudis confirmed that
- IRI is looking positively to this concept, with the ROs who approached them
- the challenge of a physical inspection superiority vs remote inspection is still there and may be age or other conditions might apply for accepting equivalency of a remote survey
- IRI was looking for a partner to work on remote survey concept

3.2.4. T. Lalas confirmed that
- he will be the PiC for such project
- for remote Flag inspection the existing checklist, reasonably amended, will still be the tool

3.2.5. N. Kasssiteropoulos presented the request by Roxana fleet for celestial navigation certified software

3.2.6. T. Lalas reported that there in no official requirement for celestial navigation as back up method for position fixing, although such practice is considered as best practice for IRI

3.2.7. T. Xenakoudis commented that BWVAG meeting under the circumstances is cancelled

3.2.8. T. Koutris noted that MS Teams might be a way out for remote BWVAG meeting

3.3. As an outcome of the meeting following actions list was agreed:

Action	Deadline	Who
Liaise with TXe for obtaining the ppt or part of it, populate the benchmarking statistics of Roxana and Kristen	30May20	LPK
Liaise with TLa for amending the flag inspection checklist and CFCIM		
Liaise with TLa for correcting the mistake of Roxana ship CY flag	30Apr20	LPK
Liaise with IRI/VKa for streamlining the extensions and dispensation statistics	30May20	VK

Following the remote meeting of 24Apr20 Mr Xenakoudis, Director, Worldwide Business Operations, Managing Director – Piraeus posted on the website of IRI following message

Quote

Virtual meetings have become the norm these days as we continue to work on the future while living in a social distancing present. Many thanks to my colleagues in Piraeus and our partners in Roxana Shipping and Kristen Marine, who participated in a virtual technical and inspections fleet overview status of their vessels, and also looked to the future to start teaming up for technologically advanced remote surveys and audits in the post-COVID-19 wave. Although it becomes easy to be focused on the present, especially when we don't know what the new normal will look like, we must remain focused on listening to our owners and operators and keeping our fleet moving without interruption in the future.

Unquote

ISO 27001:2013 (Information Security Management)

Together with the Annual ISM/ISPS and ISO audits, conducted by RINA SA, we also proceeded to achieve certification for ISO 27001 Information Security Management for the Company. This is a prestigious certification with very few Ship-management Companies having attained such. It builds on the work that we have already done in the Office and Vessels, for Cyber-security and expands on it. In this way forming a Information Security Management System (ISMS) which is a framework of policies, procedures and infrastructure that includes all legal, physical and technical controls involved in the organization's information risk management process.

Remote surveys and e-certificates

Further to our circular outgoing Message 932864 and memo 660033 of 28May20 we remind you that the e-certificates project has been launched on 26Oct17 to facilitate the smooth transfer to the e-certificates, with deadline for implementation 28Feb20, already applied for all classes except for LRS now deferred to 30Oct20.

Under the scope of this project we have also added the implementation of remote surveys, which is provided by Major Classification societies, particularly during the covid19 outbreak.

Remote surveys are bringing flexibility to the survey implementation, as they minimize the survey logistical costs, reduce operational down time and eliminate waiting for Surveyor attendance.

Digitally signed electronic documents are easier to manage, more secure and are becoming common in shipping. In particular, with the use of electronic certificates:

The digital signature displayed at the certificate certifies that the certificate is protected from edits, modifications or revisions. Electronic certificates have a Unique Tracking Number (Tracking ID), QR Code and Printable and Visible symbol that confirms the source of issuance.

Project team leader is LPK and project team members are NG, VK and as of 01Apr20 SAK and TEK were added in view of remote surveys demand, due to Covid19.

Last meeting was conducted on 24Jun20, in the presence of LPK, NG, TEK, SAK, VK. Out of this meeting following is reported for remote surveys:

3.1 Hardware and software configuration on board our fleet is defined and on order

3.2 The principle will be applied to our own internal inspections and audits as documented in TIARE/BIARE

3.3 All actions from last meeting are completed or transferred for completion in the current meeting report.

All are prompted to review the plan and contribute with ideas-actions for the successful implementation of the project.

To this extent at this phase and with deadline next meeting date 16Jul20 please:

• SAK:

• Prepare quick start instructions (for hardware installation - operation)

• KGP

• Calculate the annual surveys travelling expenses over the block fee for MBC DNV GL, ADA ABS, MVL NKK, ATS LRS for a year not SS/IS, for approximate budget impact.

• THP

• Revise training plan CP06-13/32-35 accordingly

5. Next project team meeting is planned by 16Jul20.

Roxana Shipping teams up with Navarino to install Fleet Xpress

Roxana Shipping has recently completed a major technology upgrade project that saw the company install Inmarsat Fleet Xpress (FX) on all 10 of its tanker fleet. The project has provided each vessel with the 2 Mb FX package in combination with Infinity Plus and Cobham 60 GX antennas, resulting in a significant bandwidth and technology boost for both their business and crew welfare requirements.

Stelios Kontozoglou, IT Manager and Company Cyber Security Officer for Roxana said 'Having recently completed the roll-out of Fleet Express on our tanker fleet with Navarino, we are more than happy with the benefits that the system offers.

The increased bandwidth and lower latency has been a game-changer, facilitating a number of possibilities that were just not feasible before, including easier remote support, faster, low-cost crew internet and the ability to exchange large amounts of data with the vessel without restrictions or monthly quotas.

Furthermore, the lower latency makes a big difference to using on-line applications such as remote inspections and audits, remote control, teleconferencing and so on. Cost control is also made much simpler thanks to FX's fixed fee, All You Can Eat model each month, with no unexpected cost surprises.

The FX installations went smoothly, without any issues and the Navarino support team was always on hand and ready to assist. Fleet Xpress coupled with Navarino's Infinity has given us a strong foundation and the infrastructure to introduce other advanced applications going forward.'

Ioannis Brougiannakis, Navarino's Account Manager for Roxana said 'Communication is an essential part of the ship's infrastructure as it links people and systems on board to the shore office. In addition, the reliable, high-speed crew internet that FX provides is a must-have and is especially important now during these difficult times. Our Infinity platform provides an ever-growing list of tested, functional tools for ship operators and combines well with our 24/7 5-star customer experience that we strive to offer all our customers. Navarino is very proud of our partnership with Roxana Shipping and we look forwards to working closely with them for many years to help them meet all of their technology needs.'

Roxana Shipping S.A was established as a ship management company in 1997. The company currently operates 10 modern chemical tankers and 3 bulk carriers through another affiliated company.

Slips trips and falls risk normalisation and supervision part 1

Description (including immediate action):

23Feb20, the ship was at sea, enroute to Tanjung Pelepas. The Bosun and two ABs were engaged with the de-scaling works on cargo deck, at the area of slop tank (P).
Due to deterioration of the weather, the job was suspended on main deck and the tools had to be transferred to Poop deck.
At 10:15 Hrs LT and while conducting this task the Bosun injured his left leg.
The Master and the C/O were immediately informed by the AB and the injurer was taken to ship' Hospital.
Thereafter the first aid was given to Bosun by the Chief Officer's in ship's hospital, following their previous experience and knowledge and according to the Medical Guide advices.
The Company was immediately informed for the incident by Master.
Finally his wound was cleaned, disinfected, stitched and bandaged. No hospitalization, no repatriation was required, but the bosun was considered not fit for duty for the next 48hrs.
Investigation Report issued by KNA, CD manager. assisted by NDK, Fleet Supnt on 24Feb20
Lead Investigator was KNA, CD manager since Apr15 and with Company since Sep06 and seagoing experience of 35 years, out of which 15 years as Master. He has been 50 times lead investigator.
He was assisted by NDK, Fleet Sup't since May16 and with 12 years of seagoing experience, out of which 3 years as Master. He has been 3 times lead investigator and 10 times assistant investigator.
Investigation commenced immediately after the incident.
Investigation report was completed remotely due to covid19 on 28May20 by NDK.
Investigation followed the SHELL model for the causation analysis. Out of the investigation following is reported:
The sequence of events was reported as follows.
The ChOff, the injured bosun and witnesses reported that the pre- and post operations meetings were conducted, as provided in FOM10 repair teams and in FOM07 par4.1.10 and 4.1.11, PALI and TAB safe principles were applied.
The anticipated weather change during the repair was not addressed in the pre-operations meeting.
The bosun as team leader with 2 ABs were assigned to descale deck of slop tank (P), ChOff was assigned as supervisor.
As stated the Bosun together with the ABs were engaged with the de-scaling works on cargo deck, at the area of slop tank (P), as agreed in the pre-operations meeting for about 1 hour. Just prior the coffee break and due to the deterioration of the weather, in liaison with ChOff it was decided for the job to be suspended and the tools to be transferred to the poop deck.
Bosun together with one AB was carrying the air hose and proceeding to poop deck, Bosun ahead and AB following.
As the bosun was coming up the ladder, from the main deck to the "A" Deck, on load, he slipped and hit the lower shin of his left leg, on the ladder's step, whilst the skin of the shin was torn.
Bosun was reported fitted with the proper personal protecting equipment (PPE), the boiler suit, helmet, goggles, safety shoes and gloves, and he seemed familiar with Company poster 95 on the use of PPE.
The job was supervised by the ChOff from time to time. At the time of the incident the ChOff was in the CCR.
The incident might have been deterred if:
- the suspension of job and transfer of tools was performed, well in advance, before weather deterioration
- bosun was in chronic unease, sharing the load with the 3rd AB following with empty hands
the AB or the supervisor intervened to assist the bosun on load climbing up the ladder with one hand.

Human factor:

The Bosun is a repeater to our Company with 9,8 years. He has 3,3 years service in rank, and 6,9 years of total sea service. His pre-joining familiarization was verified proper and recorded properly.
According to his physical medical examination report he was fit for working on board a ship at his rank.
He embarked on 16Sep19. His shipboard familiarization was verified proper and recorded properly.
Last time he participated in reflective LFI sessions, with Collective Normalisation, was on Dec19.
He also participated in LET Slip, Trips and Falls, as well as Take care for yourself module on Dec19.
He was adequately rested prior undertaking his duties as per CP05-14, and he was sober. The Alcohol Test was negative.

The AB is a repeater to our Company for 11 years. He has 16 years service in rank, and 16,6 years of total sea service.
His pre-joining familiarization was verified proper and recorded properly.
According to his physical medical examination report he was fit for working on board a ship at this rank.
He embarked on 16Sept19. His shipboard familiarization was verified proper and recorded properly.
Last time he participated in reflective LFI sessions, with Collective Normalisation, was on Dec19.
He also participated in LET Slip, Trips and Falls, as well as Take care for yourself module on Dec19.
He was adequately rested prior undertaking his duties as per CP05-14, and he was sober. The Alcohol Test was negative.

Slips trips and falls risk normalisation and supervision part 1 (Continued)

The ChOff is a repeater to our Company for 10,6 years. He has 15,2 years service in rank, and 19,7 years of total sea service. His pre-joining familiarization was verified proper and recorded properly.

According to his physical medical examination report he was fit for working on board a ship at this rank.

He embarked on 27Jan20. His shipboard familiarization was verified proper and recorded properly.

He was adequately rested prior undertaking his duties as per CP05-14, and he was sober.

The Alcohol Test was negative.

Hardware:

Proper personal protecting equipment (PPE), the boiler suit, helmet, goggles, safety shoes and gloves were used.

Access to working area, ladder and handrails were in good condition.

Software:

FOM07 adequately covers the permits to work and the conduction of a maintenance or repair work (PALI, TAB Safe, supervision), along with FOM10.

This work should be considered as normal task, conducted very frequently on board. Risk normalisation might have an influence to the accident.

Environment:

Job was conducted day time, in open air, visibility and humidity good.

At the time of his injury, the prevailing weather was Wind 100-6Bf, Sea 260-5B, whilst the height of the waves was abt 3.0 meters and the ship was pitching and rolling.

The deck became wet and slippery due to splashes of sea water on main deck

Root Cause(s): It seems to be that person was accidentally injured due to following reason:

Failure of proper planning and supervision to timely effect suspension of the task

Contributing factors seem to be:

- Over confidence on the execution of the job by the supervisor and the seafarer (risk normalisation)
- Non-effectiveness of pre-operations meeting in applying the TAB Safe and PALI principles
- Weather fast deterioration

Lessons learnt

- If I am the most important person on earth and if I have to return home healthy and if care about me means care about my team all of us should be in a chronic unease, not only for our but for our colleagues in the team performance.
- A message was circulated to the fleet to highlight:
  - PALI principle, as per FOM07 par4.1.10, should be applied for all jobs, and particularly the non-routine ones, to ensure proper planning and supervision of the job
  - Zero injuries and the principal order "Return Home Healthy" applies and all team leader and team members will work together to assist each other, intervening to prevent unsafe acts, being always alert and taking time for safety
  - Implementation of the stop work authority, if required, to prevent unsafe acts
  - Over confidence on the execution of the job by the supervisor and the seafarer should be avoided, as leading to risk normalisation instead of chronic unease, which must be the permanent state and mode of operations.
  - Effectiveness of pre-operations meeting to be always ensured as per TAB Safe and PALI principles
  - Additional learning session to be provided onboard and during reflective LFIs sessions ashore on the TAB Safe and PALI principle
- Refresh instructions should be provided to seafarers during the HSQE Committee Meeting, to apply the PALI principle for all jobs and take all the necessary precautions while working always with proper tools and with the appropriate PPE strict in compliance with DMS Poster 95
- Further focus to Resilience modules of "care about myself" and LET "Slips trips and falls, on the reflective learning courses of officers and ratings ashore in Roxana training center and combine with the Communication for Resilience modules, including stop work authority and intervention to prevent unsafe acts to apply in the everyday operations.

Slips trips and falls risk normalisation and supervision part 2

Description (including immediate action):
On 12Apr20, the ship was sailing in Taiwan Strait, south bound, enroute to Spore. The 4/E with the 5/E, were engaged with the Fresh water generator cleaning work, in the E/R.
At 11:00hrs (UTC+9hrs) the 4/E injured his right hand's ring finger.
The Master and the C/O were immediately informed by the 2/E and the injurer was taken to ship' Hospital.
Thereafter the first aid was given to 4/E by the 2nd Officer under the Chief Officer's supervision in ship's hospital, following their previous experience and knowledge and according to the Medical Guide advices. The Company was immediately informed for the incident by Master.
Finally his wound was cleaned and wrapped up by bandage whilst some medication was given to him for further treatment on board.
Investigation Report issued by KNA, CD Manager assisted by NDK, Fleet Supnt on 22Apr20
Lead Investigator was KNA, CD manager since Apr15 and with Company since Sep06 and seagoing experience of 35 years, out of which 15 years as Master. He has been 50 times lead investigator.
He was assisted by NDK, Fleet Sup't since May16 and with 12 years of seagoing experience, out of which 3 years as Master. He has been 3 times lead investigator and 10 times assistant investigator.
Investigation commenced immediately after the incident.
Investigation report was completed remotely due to Covid19 on 03Jun20 by NDK.
Investigation commenced immediately after the incident.
Investigation report was completed remotely due to covid19 on 28May20 by NDK.
Investigation followed the SHELL model for the causation analysis. Out of the investigation following is reported:
According to the injured and witnessed person reports, the seafarer (4/E) together with 5/E were engaged on Fresh water' cleaning works, in the E/R, as they had been instructed by the C/E and 2.E.
PALI principle and TAB Safe meeting prior and post operations were reported done as provided in Company DMS and the supervision for this job was assigned to the 2nd eng, who was engaged to repair works in ER workshop, two platforms up from the platform the job was executed. . At the time of the incident the 2/E was in the ECR.
Both engineers were reported fitted with the proper personal protecting equipment (PPE), the boiler suit, helmet, goggles, safety shoes and gloves and they were aware of the relevant company poster 95.
4/E dismantled the lower flange of the inlet water pipe at first, then the upper one. The 5/E was holding the pipe. The pipe was not secured at all. As soon as the upper flange was released, they tried to put the pipe on deck. It seems the weight of the pipe could not be supported by the 5/E and the pipe started falling. The 4/E on seeing the pipe' falling grabbed the pipe from the upper flange, by his right hand. Unfortunately he could not suspend the pipe' further falling and finally his right hand' ring finger was trapped between the flange of the pipe and the nearby supporters.
The incident might have been deterred if the pipe was secured by a rope thorough of which the pipe might have been slacked easily and be laid on deck.

Human factor:
ChEng time in years: with the Operators 9.1, Sea going service in present rank 2.2, Sea going service in this type of tankers 5.1, Seagoing service on all tankers' type 5.1. Joined the ship on 12Nov19.
2nd Eng time in years: with the Operator 8.4, Sea going service in present rank 0.9, Sea going service in this type of tankers 4.3 Years, Sea service on all tankers' type 4.8. Joined the ship on 22Jan20.
ER team qualification matrix reviewed and verified more than adequate.
The 4/E is a repeater to our Company with 3.3 years of service. He has 0.5 years service in rank, 2.1 years sea service on Tankers and 2,5years of total sea service. His pre-joining familiarization was verified proper and recorded properly.
According to his physical medical examination report he was fit for working on board a ship at his rank.
He embarked on 21Sep98. His shipboard familiarization was verified proper and recorded properly.
Last time he participated in reflective LFI sessions, with chronic unease, was in Jan20.
He also participated in LET Personal Injury, as well as Take care for yourself module on Jan and Mar20. He was adequately rested prior undertaking his duties as per CP05-14, and he was sober. The Alcohol Test was negative.
The 5/E is a repeater to our Company for 2.5 years. He doesn't have any sea service in the rank. He has 1.0 year of sea service on tankers and 1.3 years of total sea services.. His pre-joining familiarization was verified proper and recorded properly.
According to his physical medical examination report he was fit for working on board a ship at this rank.
He embarked on 12Nov19. His shipboard familiarization was verified proper and recoded properly.
Last time he participated in reflective in reflective LFI sessions with chronic unease in Jan20.
He has also participated in LET Personal Injury, on Mar20. He has not participated in Take care for yourself Resilience module since his embarkation. He was adequately rested prior undertaking his duties as per CP05-14 and was sober. The alcohol test was negative.

Slips trips and falls risk normalisation and supervision part 2 (Continued)

Hardware:

Tools and PPE used were the proper and in good condition, work was a planned maintenance job, equipment and access in good shape.

Software:

FOM07 adequately covers the permits to work and the conduction of a maintenance or repair work (PALI, TAB Safe, supervision), along with FOM10. This work should be considered as normal task, conducted very frequently on board. Risk normalisation might have an influence to the accident.

Environment:

At the time of the cleaning work of the Fresh water Generator, the prevailing weather was Wind 350-6Bf, Sea 350-5B, whilst the height of the waves was abt 2.0 meters and the vessel was rolling abt. 2-4 deg.

The platform in the working environment was clean of oil substances and access was verified undistracted.

Lighting and ventilation reported to be adequate.

Root Cause(s It seems to be lack of experience / competence of the Seafarer, been engaged with the pipe's mishandling, due to which the 5/E might had been injured as well

Contributing factors seem to be:

- Risk normalisation of the injured colleague in conducting this repair task
- Risk normalisation for the supervisor, been over confident on the execution of this job
- Effectiveness of pre-operations meeting in applying the TAB Safe and PALI principles

Lessons learnt

- If I am the most important person on earth and if I have to return home healthy and if care about me means care about my team all of us should be in a chronic unease, not only for our but for our colleagues in the team performance.
- A message was forwarded to all vessels highlighting to all Masters the importance of the PALI principle, the care about myself and the proper supervision in conducting all tasks in HSQE incident free manner, effectively and efficiently.
- efresh instructions should be provided to seafarers during the HSQE Committee Meeting, to apply the PALI principle for all jobs and take all the necessary precautions while working always with proper tools and with the appropriate PPE strict in compliance with DMS Poster 95
- Further focus to Resilience modules of "care about myself" and LET "Slips trips and falls, on the reflective learning courses of officers and ratings ashore in Roxana training center and combine with the Communication for Resilience modules, including stop work authority and intervention to prevent unsafe acts to apply in the everyday operations.

A New ECA And Speed Reduction Limits In South Korean Ports

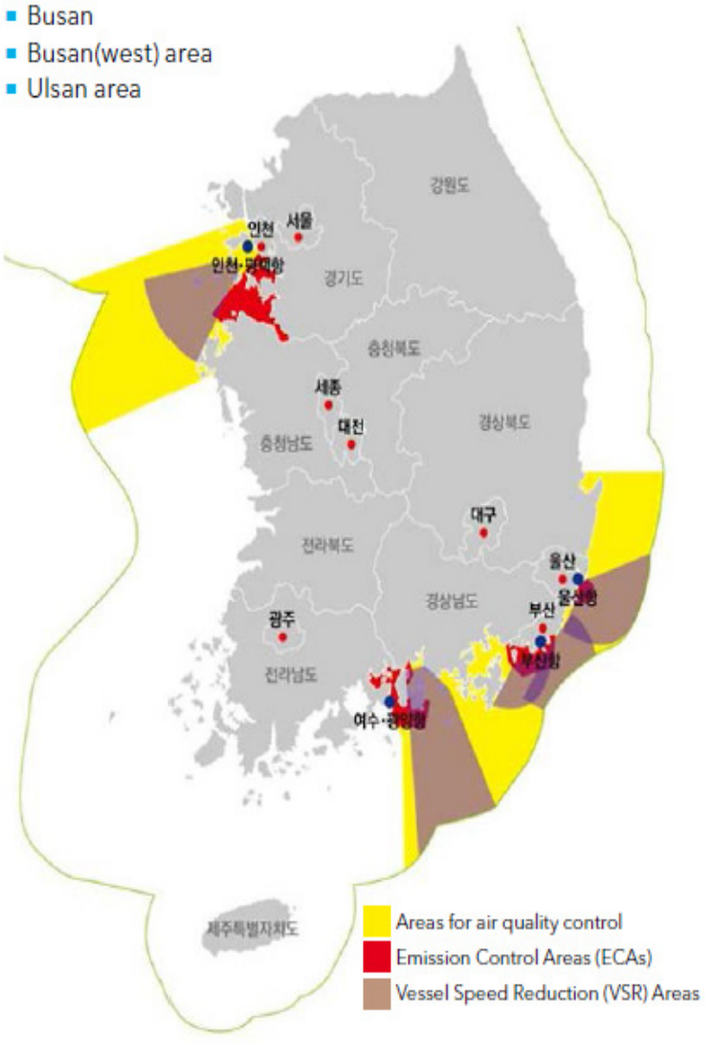
To reduce particulate emissions from ocean going ships in its ports, South Korea has released a "special act on improvement of air quality in port areas". Find out more about the Korean ECA and its Vessel Speed Reduction (VSR) program in this statutory news.

The South Korean Ministry of Maritime Affairs and Fisheries ("MOF") has announced an air quality control programme that defines selected South Korean ports and areas as Emission Control Areas (ECA). A program with maximum sulphur limits (0.1%) and speed limits will support the effectiveness of the program. The following ports/areas are covered by the air quality control programme:

The air quality control initiatives in South Korea consist of two parts:

1. Sulphur restriction
1) From 1 September 2020 it is mandatory to use fuel with max. 0.1% sulphur content while berthing.
Vessels will be required to use max 0.1% sulphur fuel when berthing/anchoring for the times set out below:
• Berthing: 1 hour after completion of berthing until 1 hour before de-berthing.
• Anchoring: 1 hour after completion of anchoring until 1 hour before leaving anchor.

- Incheon, Pyeongtaek, Dangjin Area
- Yeosu, Gwangyang area
- Busan
- Busan(west) area
- Ulsan area



2) From 1 January 2022: It will be mandatory to use fuel with max. 0.1% sulphur content while navigating ECAs.

2. Speed reductions
The port areas selected will be designated as "VSR programme Sea Areas". Each Sea Area will span 20 nautical miles in radius, measured from a specific lighthouse in each port.
Ships should navigate no faster than a maximum speed of 12 knots for container ships and car-carriers, 10 knots for other ship types, when moving from starting point to an end point within a Sea Area, see table:

Ship type	Recommended speed (knot) for port:			
	Busan	Ulsan	Yeosu, Gwangyang	Incheon
Container ship	12	12	12	12
General cargo ship	10		10	10
Car carrier	12			
Crude oil carrier		10		
Chemical carrier		10		
LNG carrier			10	10

PSC inspections on fuel 2020 switching (Continued)

1) Ships included in the program:
Ships covered under for the VSR Program differ at each port, but must be over 3,000GT and among the top 3 "finedust-emitting" ship-types (see chart above).
2) Lower speed pays off:
Under the VSR Program, ships will have their port facilities fees lowered when they enter defined port areas at speed levels as defined above. For affected ships, port entry/leave fee (current 111 KRW per ton), will be discounted. The discount ceiling will differ between the ports. Container ships, for example, which traditionally enters port at relatively high speeds, will enjoy up to a 30% discount, while other ships will be granted a 15% discount.

Recommendations
Shipowners and operators should be aware of the following regulations:
South Korean ECA - From 1 September 2020, ships berthing or anchoring at certain Korean ports (South Korean ECA), must use max. 0.1% sulphur content fuel (or reduce emissions below this target). From 1 January 2022 this limit also applies when navigating the ECA area.
Vessel Speed Reduction (VSR) Program
Port fees will be reduced for ships which lower their speeds to set targets defined in the VSR program Sea Areas.

References
Ministry of Oceans and Fisheries article (KOR)
Minisrty of Oceans and Fisheries news on "Vessel speed reduction (VSR) program to start December this year" (ENG)

Source: DNV-GL

Fuel 2020 Excessive cylinder liner wear and ring breakage

Quite a few cases on excessive cylinder liner and piston ring breakage have been reported on ships when burning 0.50% sulphur VLSFOs. The reports indicated:

- Significant worn out, broken and seized piston rings
- Accelerated cylinder liner wear, requiring liners to be changed prematurely after only 20,000 ~ 25,000 R/H, after all wear patterns had been in line with manufacturers guidelines beforehand.
- Multiple Fuel Injector failures
- Having to run in High Risk Areas (HRA) and restricted waters with fuel pumps lifted to allow us to reach a safe haven to allow maintenance to be completed
- Scavenge Fires due to the above issues of worn out liners and damaged rings
- Performance Tests of the Main Engines are showing the engines to be balanced with no significant drop of in parameters.

(In the above particular reports, a hybrid mixture of TBN L.O.'s was used, whilst they consumed existing stocks of TBN 70 & 100 before changing to TBN 40, with adjustments made in the feed rates.)

Lloyds Register FOBAS have also investigated approx. 20 such cases where ships reported piston ring breakage, undue wear of piston rings and liners. FOBAS were also in discussion with engine manufacturer to understand the metallurgy side of things. Their initial comments (based on the data to hand so far) are as below:

- From the parameters tested, the VLSFOs combustion / ignition characteristics seems to be satisfactory, both in terms of CCAI and additional FIA testing. The data did not suggest increased afterburning time. However we still have very small data set to fully conclude it. Furthermore additional FIA testing is only done on fuels use of which caused reported problems.
- Mainly such problems are related to the management of BN number of cylinder oils and most importantly feed rate.
- Drain oil analysis is not enough and manual inspection is recommended at regular frequency.
- When using new piston rings coated with cermet, it is important to ensure cylinder liner is also in good shape. Some sort of reconditioning may be required to fully benefit from new piston ring types.

One of the VISWA related report conclusions is: Choosing a cylinder oil with an optimum feed rate of the base number is critical.
For the moment in our fleet such incidents have not been reported.
Our ships are using TBN40 cylinder luboils, Engine and lubricators, along with cylinder oil supplier recommendations apply.
CP20 par4.12.6 and posters 74 and 82 relate to continuous operation in VLSFO and ULSFO and the change over from VLSFO to ULSFO.

International: IMO Marine Engine Regulations

International Maritime Organization (IMO) is an agency of the United Nations which has been formed to promote maritime safety. It was formally established by an international conference in Geneva in 1948, and became active in 1958 when the IMO Convention entered into force (the original name was the Inter-Governmental Maritime Consultative Organization, or IMCO, but the name was changed in 1982 to IMO). IMO currently groups 167 Member States and 3 Associate Members.

IMO ship pollution rules are contained in the "International Convention on the Prevention of Pollution from Ships", known as MARPOL 73/78 . On 27 September 1997, the MARPOL Convention has been amended by the " 1997 Protocol";, which includes Annex VI titled " Regulations for the Prevention of Air Pollution from Ships". MARPOL Annex VI sets limits on NOx and SOx emissions from ship exhausts , and prohibits deliberate emissions of ozone depleting substances .

The IMO emission standards are commonly referred to as Tier I...III standards. The Tier I standards were defined in the 1997 version of Annex VI, while the Tier II/III standards were introduced by Annex VI amendments adopted in 2008, as follows:

• 1997 Protocol (Tier I)-The " 1997 Protocol" to MARPOL, which includes Annex VI, becomes effective 12 months after being accepted by 15 States with not less than 50% of world merchant shipping tonnage . On 18 May 2004, Samoa deposited its ratification as the 15th State Joining Bahamas, Bangladesh, Barbados, Denmark, Germany , Greece, Liberia, Marshal Islands, Norway, Panama, Singapore , Spain, Sweden, and Vanuatu) . At that date, Annex VI was ratified by States with 54.57% of world merchant shipping tonnage . Accordingly, Annex VI entered into force on 19 May 2005 . It applies retroactively to new engines greater than 130 kW installed on vessels constructed on or after January 1, 2000, or which undergo a major conversion after that date . The regulation also applies to fixed and floating rigs and to drilling platforms (except for emissions associated directly with exploration and/or handling of sea-bed minerals). In anticipation of the Annex VI ratification, most marine engine manufacturers have been building engines compliant with the above standards since 2000 .

• 2008 Amendments (Tier II/III)-Annex VI amendments adopted in October 2008 introduced

(1) new fuel quality requirements beginning from July 2010 , (2) Tier II and Ill NOx emission standards for new engines, and (3) Tier I NOx requirements for existing pre-2000 engines.

The revised Annex VI entered into force on 1 July 2010 . By October 2008, Annex VI was ratified by 53 countries (including the Unites States), representing 81.88% of tonnage.

Emission Control Areas. Two sets of emission and fuel quality requirements are defined by Annex VI: (1) global requirements, and (2) more stringent requirements applicable to ships in Emission Control Areas (ECA). An Emission Control Area can be designated for SOx and PM, or NOx, or all three types of emissions from ships, subject to a proposal from a Party to Annex VI.

Existing Emission Control Areas include:

- Baltic Sea (SOx: adopted 1997 I entered into force 2005; NOx: 2016/2021)
- North Sea (SOx: 2005/2006 ; NOx: 2016/2021)
- North American ECA, including most of US and Canadian coast (NOx & SOx: 2010/2012).
- US Caribbean ECA, including Puerto Rico and the US Virgin Islands (NOx & SOx: 2011/2014).

Greenhouse Gas Emissions. 2011 Amendments to MARPOL Annex VI introduced mandatory measures to reduce emissions of greenhouse gases (GHG). The Amendments added a new Chapter 4 to Annex VI on "Regulations on energy efficiency for ships"

NOx Emission Standards

NOx emission limits are set for diesel engines depending on the engine maximum operating speed (n, rpm), as shown in Table 1 and presented graphically in Figure 1. Tier I and Tier II limits are global, while the Tier Ill standards apply only in NOx Emission Control Areas.

Table 1. MARPOL Annex VI NOx emission limits

Tier	Date	NOx Limit, g/kWh		
		n < 130	130 ≤ n < 2000	n ≥ 2000
Tier I	2000	17.0	$45 \cdot n^{-0.2}$	9.8
Tier II	2011	14.4	$44 \cdot n^{-0.23}$	7.7
Tier III	2016†	3.4	$9 \cdot n^{-0.2}$	1.96
† In NOx Emission Control Areas (Tier II standards apply outside ECAs).				

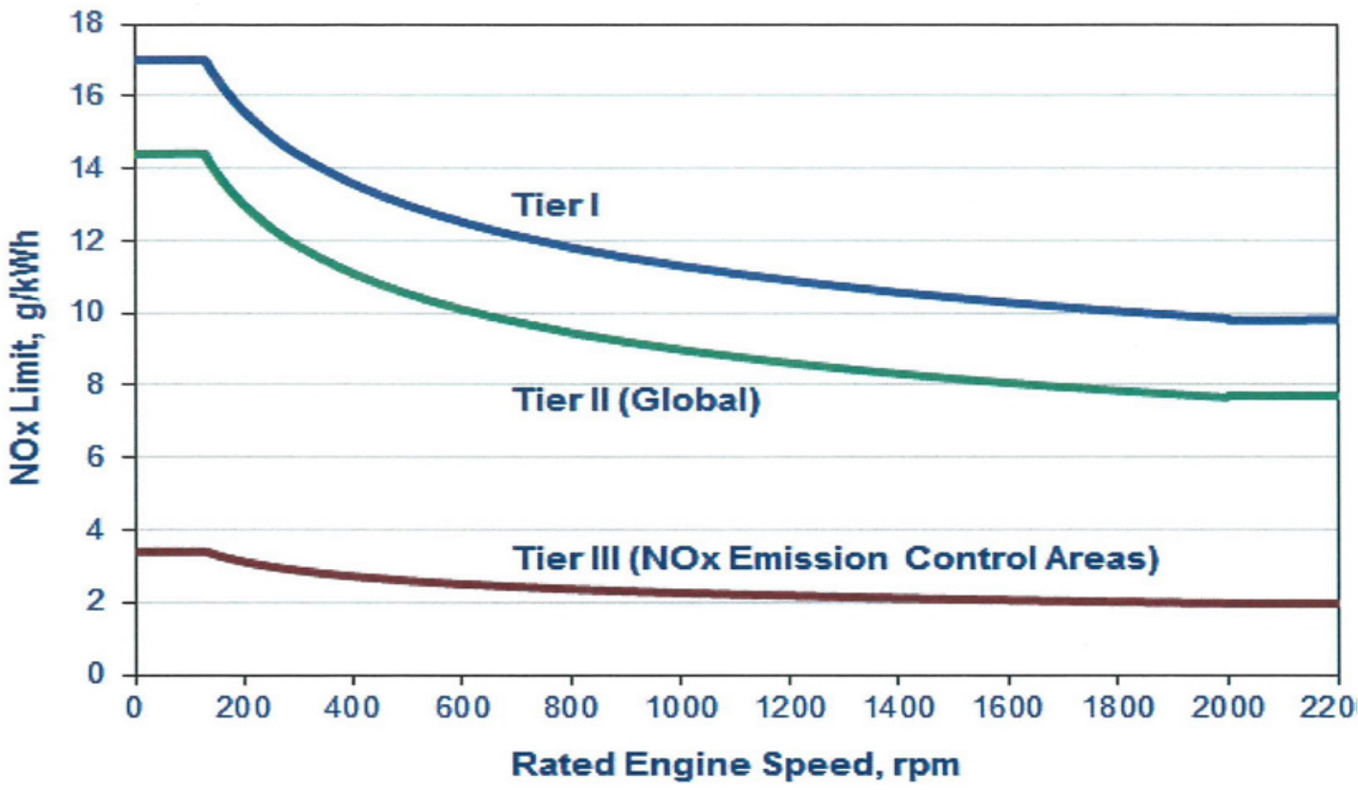


Figure 1. MARPOL Annex VI NOx emission limits

Tier II standards are expected to be met by combustion process optimization. The parameters examined by engine manufacturers include fuel injection timing, pressure, and rate (rate shaping), fuel nozzle flow area, exhaust valve timing, and cylinder compression volume.

Tier III standards are expected to require dedicated NOx emission control technologies such as various forms of water induction into the combustion process (with fuel, scavenging air, or in cylinder), exhaust gas recirculation, or selective catalytic reduction.

Pre-2000 Engines. Under the 2008 Annex VI amendments, Tier I standards become applicable to existing engines installed on ships built between 1st January 1990 to 31st December 1999, with a displacement 90 liters per cylinder and rated output 5000 kW, subject to availability of approved engine upgrade kit.

Testing. Engine emissions are tested on various ISO 8178 cycles (E2, E3 cycles for various types of propulsion engines, 02 for constant speed auxiliary engines , C1 for variable speed and load auxiliary engines).

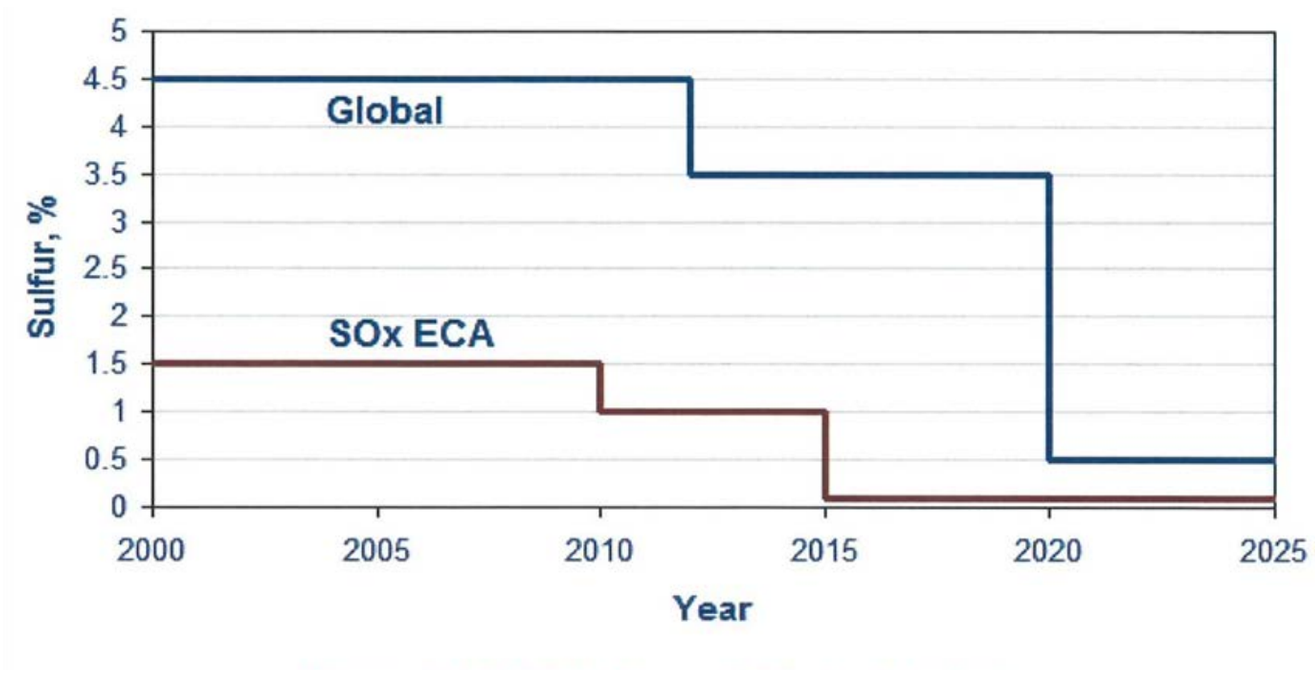
Addition of not-to-exceed (NTE) testing requirements to the Tier Ill standards is being debated. NTE limits with a multiplier of 1.5 would be applicable to NOx emissions at any individual load point in the E2/E3 cycle.

Engines are tested using distillate diesel fuels, even though residual fuels are usually used in real life operation.
Further technical details pertaining to NOx emissions , such as emission control methods , are included in the mandatory "NOx Technical Code", which has been adopted under the cover of "Resolution 2".

Sulfur Content of Fuel
Annex VI regulations include caps on sulfur content of fuel oil as a measure to control SOx emissions and, indirectly , PM emissions (there are no explicit PM emission limits) . Special fuel quality provisions exist for SOx Emission Control Areas (SOx ECA or SECA). The sulfur limits and implementation dates are listed in Table 2 and illustrated in Figure 2 .

Table 2. MARPOL Annex VI fuel sulfur limits

Date	Sulfur Limit in Fuel (% m/m)	
	SOx ECA	Global
2000	1.5%	4.5%
2010.07	1.0%	
2012		3.5%
2015	0.1%	
2020		0.5%



Heavy fuel oil (HFO) js allowed provided it meets the applicable sulfur limit (i.e., there is no mandate to use distillate fuels).
Alternative measures are also allowed (in the SOx ECAs and globally) to reduce sulfur emissions , such as through the use of scrubbers . For example, in lieu of using the 1.5% S fuel in SOx ECAs, ships can fit an exhaust gas cleaning system or use any other technological method to limit SOx emissions to 6 g/kWh (as S02).

Greenhouse Gas Emissions

MARPOL Annex VI, Chapter 4 introduces two mandatory mechanisms intended to ensure an energy efficiency standard for ships: (1) the Energy Efficiency Design Index (EEDI) , for new ships, and (2) the Ship Energy Efficiency Management Plan (SEEMP) for all ships.

- The EEDI is a performance-based mechanism that requires a certain minimum energy efficiency in new ships. Ship designers and builders are free to choose the technologies to satisfy the EEDI requirements in a specific ship design.
- The SEEMP establishes a mechanism for operators to improve the energy efficiency of ships .

The regulations apply to all ships of and above 400 gross tonnage and enter into force from 1 January 2013. Flexibilities exist in the initial period of up to six and a half years after the entry into force , when the IMO may waive the requirement to comply with the EEDI for certain new ships, such as those that are already under construction .

In April 2018 , the IMO adopted an Initial Strategy on the reduction of GHG emissions from ships. The strategy calls for strengthening the EEDI requirements and a number of other measures to reduce emissions, such as operational efficiency measures, further speed reductions, measures to address CH4 and VOC emissions, alternative low-carbon and zero carbon fuels , as well as market-based measures (MBM).

Other Provisions

Ozone Depleting Substances. Annex VI prohibits deliberate emissions of ozone depleting substances, which include halons and chlorofluorocarbons (CFCs). New installations containing ozone-depleting substances are prohibited on all ships. But new installations containing hydro chlorofluorocarbons (HCFCs) are permitted until 1 January 2020.

Annex VI also prohibits the incineration on board ships of certain products, such as contaminated packaging materials and polychlorinated biphenyls (PCBs).

Compliance. Compliance with the provisions of Annex VI is determined by periodic inspections and surveys . Upon passing the surveys, the ship is issued an “International Air Pollution Prevention Certificate”, which is valid for up to 5 years. Under the “NOx Technical Code”, the ship operator (not the engine manufacturer) is responsible for in-use compliance.

This article based in part on information provided by Michael F. Pedersen of MAN Diesel NS .

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