News Waves

Jan - Mar 2022 Edition 2022-01

ROXANA SHIPPING S.A.

Contents

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Please recycle

Message from TEK

"it is a fact that IMO and all international shipping associations have highlighted the problem, for crew, and have proposed to the coastal states measures to relieve the pressure to the seamen, however there was not any substantial result. We owe a great respect to our seamen for the resilience they have shown all this period of instability."

The 1st quarter of 2022 finds our world, for more than two consecutive years, under the threatening shadow of covid19, and on top of that the dark clouds of the war in Ukraine are enhancing the worldwide instability. As if this is not enough piracy activity in GoG mainly is again increasing. In this without precedent environment our operations, particularly crew management, supplies of stores and spares and ship attendances, inspections and audits were heavily affected.

And it is a fact that IMO and all international shipping associations have highlighted the problem, particularly for crew, and have proposed to the coastal states measures to relieve the pressure to the seamen, however there was not any substantial result. We owe a great respect to our seamen for the resilience they have shown all this period of instability.

With the support and understanding of our seafarers ashore and on board, we have managed this crisis incident free, effectively and efficiently. We are prepared with the assumption that this crisis will last throughout 2022 at least.

The good news from our side is the wage scale and the internet on board, for which a separate announcement to the fleet will follow.

In this challenging environment, undistracted, we restlessly continue working for consolidating the culture of an open and fearless organization, where all of us will be comfortable and fearless to speak up our concerns, share our ideas, our failures and success, actively listen to others in our team.

Last year we introduced the workshop "Physical wellbeing - exercises" to emphasize the importance of physical exercising for the health, and the workshops "Leadership and the Adair model", "Teamwork and the Belbin team roles" and related them to 3x3x3 Roxana soft skills model. We also introduced the workshop "How you respond matters", and related it to the human performance principles, humans err, humans want to do a good job, human error is opportunity for system improvement.

We continued to elaborate on human performance with the workshops on "Communication for resilience and care, Take care of myself and my team, Making compliance commitment, Learner mindset.

The reflective learning engagements in 2021 were conducted three times , remotely through Zoom platform, with the participation of about 700 officers and ratings and shore employees, facilitated by myself with the assistance of capt P. Sidorkin, capt D. Verkhoturov and selected officers.

During these sessions we had also the chance to elaborate on the concepts of "fearless ego for success", the most important "me", take care about myself and my team, Return Home Healthy all times! and the human-centric S.H.E.L.L model, the three pillars (CPAR Incident reporting and investigation, corrective and preventive actions, MoC management of change and RM risk management) and engagement, the soft skills and the reflective learning.

We further concentrated on the concept of Health (physical and mental) and Competence (hard and soft) for performance, the concept of Fair and Just culture for a No Blame culture, based on the three human performance principles Humans err, Humans want to do a good job and human error is opportunity for system improvement, as prerequisites for an open and fearless organization.

These workshops are designed in line with our Mission and to facilitate our route towards a fearless organization, where each one of us can thrive.

Committed to ensure for our seamen undistracted operations in port we continue promoting the remote surveys notation. Two RINA classed ships are already assigned by RINA this voluntary notation, the remaining fleet to follow when the other classes will introduce the remote notation.

Our engagement with the remote surveys in four different pilot projects with major class societies and with Marshall Islands flag opened the way for the remote surveys notation.

A remarkable number of projects are running in parallel to manage all changes necessary for our Company to achieve our 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.

A new five years plan is developed with the Board of Directors, to be released within 2023.

We are happy to confirm once more the steady course of the Fleet and the Company towards high levels of performance. Clear evidence of this commitment to excellence in terms of safety, environment protection, security and quality for this period is the KPIs where most of the targets were achieved, even exceeded. A new algorithm for identifying the best ship of the year is introduced,

incorporating all KPIs with a weight factor.

Extract of all above is included in the Hot Stuff section.

The Who is Who section this time hosts Masters Koshetov Igor, Gulin Aleksey and Syrov Andrey, who serve our fleet for about 7 years each, being with us for more than 10 years, and who have greatly contributed to the success of Roxana Shipping SA.

The New Rules section contains reports on the 8th session of the IMO's Sub-Committee on Human Element, Training and Watchkeeping (HTW 8) and the 8th session of the IMO's Sub-Committee on Ship Systems and Equipment (SSE 8), and updates on CII, EEXI and enhanced SEEMP, and ammonia as fuel.

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

Who is Who

Capt. Koshetov Igor

Igor Koshetov was born in Cazig village, Atyrauskiy region on 25 November 1956.
He is a graduate of Far Eastern State Technical Fisheries University (1990).
He received the Master's License in June of 2000.
Capt. Igor joined Roxana Shipping S.A. on 26 April 2011, where he offered his services on M/T Marvel, as Master. He has a total sea service of 6.7 years with our Company.
Capt. Koshetov is married to Elena and has 2 children.
He is very happy to understand the mechanical construction in details, so he is being occupied in his garage by dismantling and reassembling of the various mechanisms.
He is currently ashore enjoying his vacation with his family.

Capt. Gulin Aleksey

Aleksey Gulin was born in Veseliy Yar village on Primorskiy region on 03 February 1978.
He graduated from Admiral Nevelskoi Maritime State University name in 2001 and acquired the Master's License in October of 2014.
Capt. Aleksey joined Roxana Shipping S.A. on 22 August 2010, where he offered his services on our M/T Ocean Dignity as Chief Officer.
He was promoted to Master's rank on 04 November 2014 and has a total sea service of 5.7 years with our Company.
Capt. Gulin is married to Ekaterina and has 2 children.
He is fond of hunting, fishing and travelling. He also enjoys rock, classical and ethnic music, ancient history, classical Russian literature and linguistics.
For the time being, he is on board our MT Magic Star.

Capt. Syrov Andrey

Andrey Syrov was born in Vladivostok on 03 December 1984.
He is a graduate of Admiral Nevelskoi Maritime State University (2018) and received the Master's License in December of 2021.
Capt. Andrey joined Roxana Shipping S.A. on 24 June 2010, where he served our M/T Ocean Dignity, as Third Officer.
He has a total sea service of 5,8 years with our Company.
Capt. Syrov has 2 children. He enjoys rock, classical and jazz music, ancient history, Russian literature and he is also keen on travelling.
He is currently offering his services on our M/T Melody as a Master.

After the difficult COVID era, the shipping industry and manning activities faced strong world political crisis.

Despite this challenging environment RoKcs continues undistracted to provide quality services to our customers. We successfully manage 11 tankers for Roxana Shipping. V.Ships Greece delivered another supramax bulker on 5th January and with the 3 handies bulk carriers of ROKS Maritime we successfully manage 9 bulkers. With this opportunity we thank our customers for their trust and their effective cooperation throughout this difficult period. A lot of appreciation also to our partners and our seamen for their resilience and their loyalty.

In March we conducted the learning engagements ashore for our officers and ratings. The learning engagements were conducted remotely via Zoom conference, but still our seamen split in groups were effectively engaged for almost 5 days in refresh courses and 7 workshops for both tanker and bulker pools. Officers and engineers, deck and engine hands cooks as well participated in LFI and LET engagements with full dedication and attendance, a further evidence to their commitment for IF EffEff operations, so that all return home with full basket.

Capt. D. Verkhoturov
Capt. P. Sidorkin
V. Shmegelskaia

"Crewing Agency Roxana Kristen Crewing Services" LLC was established in 2008 recruiting seamen on Containers, Bulkers and Chemical Tankers"

Roxana / ROKS pools external learning engagements and training activities

1. Techcross Ballast Water Treatment System

Techcross, Korea training center organized a remote training session on TechCross Ballast water Treatment system ECS 1600x1 operation, inspection, maintenance and trouble shooting took place on 10Mar22.
30 officers of Roxana and ROKS attended and completed the course successfully, and they were provided with the relevant certificate.

2. Bills of Lading – Practical guide

Swedish club organized a webinar on 23Mar22 with the topic " Bills of Lading – Introducing Practical Guide & In Focus article" arranged by Swedish Club. All Roxana and ROKS Masters and Chif Officers ashore were given the opportunity to attend the course, thus enhancing their awareness on matters related to issuance and validity of B/Ls.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

The reflective learning engagements of Officers and Ratings ashore were conducted remotely with the use of Zoom platform for 35 officers (6 Bulker and 29 Tanker officers) officers and 22 ratings (15 Tanker and 7 Bulker) on 09-11Mar22, for47 junior officers 17Mar22 and for 14 cooks and messmen 24Mar22.
All leaning engagements were facilitated by our Managing Director T. Koutris, with the assistance of RoKcs Training Officer capt P. Sidorkin, General Manager capt D. Verkhoturov and 2nd officer D. Galaida.
In particular, the purpose of the learning courses, which took place in March 2022, was to refresh Officers and Ratings's knowledge on the Company's Documented Management System (DMS), Bridge Team Management (BTM) and Engine Room Team Management (ERTM).
Topics like the "fearless ego for success" concept, Company Vision, Mission and policies , the three pillars and engagement: Incident reporting investigation and CPARs / Management of Change / Risk Management, Health and competence for performance, Human performance principles, Fair and Just for no blame culture, Health and Safety aspects and management, Environmental aspects and management, Quality management, DMS reporting and document control, Ulysses Doc Manager, Danaos crewing, Career development and appraisals, emergency preparedness, , Oil Record Book, Garbage Management, cyber security and ISPS, last Management Review and KPIs, Cargo Operations, Bunkering procedures, New Rules, Log Book entries, observations from 3rd party inspections and commercial issues were discussed.
Seven workshops were conducted with the aim to boost the development of a Fair and Just for No Blame culture for a fearless organization, where all of us feel comfortable to speak up his concerns and his ideas and actively listen the others in his team.

The seven workshops, which were conducted, are listed below:

Topic	Officers	Ratings	Jun Off	Cook
Workshop Communication for Resilience and Care - Let's talk	10Mar22	9Mar22	17Mar22	24Mar22
Workshop Take care of myself and my team - Leading my team's wellbeing	10Mar22	9Mar22	x	24Mar22
Workshop Learner Mindset	10Mar22	9Mar22	17Mar22	24Mar22
Workshop FOM01 revision	11Mar22	x	x	x
Workshop FOM10 revision	11Mar22	x	x	x
Workshop How you respond matters	11Mar22	x	17Mar22	x

Upon completion of each workshop all attendees filled in documents for revision, on-line questionnaires and course evaluation forms.

Links with the responses analytics of the questionnaires were distributed to all participants for their review and a further discussion was carried out on the analytics.
Conclusions, suggestions and action plan per workshop is reported below.

Our Managing Director T. Koutris confirmed that, all going well, we plan physical meetings for Dec22 engagements and that all issues raised above will be considered for the next remote workshops.
Finally all participants were encouraged to contact their facilitator, their managers, RoKcs/P. Sidorkin and D. Verkhoturov and their managing director T. Koutris anytime for any idea or concern.
The workshops conducted this time are described below analytically.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

1 Workshop: "Communication for Resilience and Care – Let's talk"

The workshops "Communication for Resilience", renamed "Communication for Resilience and Care", supplement the "Take care of myself and my team" workshops, using incidents and everyday engagements, consolidate proposals for:

- ***developing a culture of connection, thank you and positive communication as an evidence of care, appreciation and respect***
- ***increasing the awareness for all participants why and how EffEff communication in a team boosts the individuals and the team's mental health and resilience, hence team's HSQE IF EffFff operations.***

The questionnaire is designed for us to:

- ***increase the awareness and reduce the stigma of mental health***
- ***introduce the ALL ACT drive*** ***A***sk***L***ook***L***isten ***A***ct***C***heckback***T***akecareofyou
  (***Feel touch taste and smell is also valid ALL FACT)***
  as a means to approach a colleague suffering.
- ***empower EffEff communication, particularly better conversations about mental health***

1 Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop " Communication for Resilience and Care – Let's talk" and for:

- ► the prompt and proper fill in of the questionnaire
- ► your further proposals to improve the way we approach a struggling colleague and show our genuine interest

2 Background

2.1 The series of workshops "Communication for Resilience", renamed "Communication for Resilience and Care", delivered since Jun18, supplements the "Take care of myself and my team" series of workshops.

2.2 This workshop:

- ► Based on
  - • the 4 PnS Resilience modules of Making connections, Connection with home, Gratitude and Positive communication,
  - • the Shell PnS Letstalk course (as of MR20-02)
- ► and using incidents and everyday engagements on board, consolidates proposals for:
  - • developing a culture of connection, thank you and positive communication as an evidence of care, appreciation and respect
  - • increasing the awareness for all participants why and how EffEff communication in a team boosts the individuals and the team's mental health and resilience, hence team's HSQE IF EffFff operations.

2.3 During the "Communication for Resilience and Care, LetsTalk" workshop the facilitator and his team had the opportunity to:

- ► Review the Resilience Vol2 and Vol3
- ► Go through the PnS "Let's talk" module, available off-line and in Russian as follows:
  - • Module 1 Online - We all have a State of Mental Health
  - • Module 2 Online - Support Structures
  - • Module 3 Online - ALL ACT. Supporting Others
  - • Module 4 Online - Promoting Positive Mental Health and Reducing Stigma, along with the Stigma awareness video

Mental health is increasingly recognised within the shipping industry as an important issue. There is a growing awareness that our seafarers suffer a higher level of mental health issues and suicide compared to land-based workers. However, we may find mental health issues difficult to talk about.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

3 Purpose

These workshops aim to:

- ► reduce the stigma of mental health in shipping,
- ► empower seafarers to have better conversations about mental health together and
- ► help them to know how to access professional support when it is needed.
- ► and introduce the ALL ACT drive **A**sk**L**ook**L**isten **A**ct**C**heckback**T**akecareofyou (**F**eel touch taste and smell is also valid ALL FACT) as a tool of communication for resilience and care for your team and for a team performing IF EffEff.

4 Key messages

The key messages of the course, as passed on to the participants:

- ► We can all help each other at the human level, feeling confident to ask your colleagues: "Are you ok? What could be done to make you feel better?"
- ► Using ALL ACT is a structured way to open a conversation and support our colleagues
- ► Be aware of the help available to support our colleagues and make sure to take care of yourself too.

5 Records

5.1 Concluding the workshop

- ► the relevant questionnaire was filled out online, verifying the knowledge obtained and keeping a record of each one's personal commitments.
- ► the evaluation questionnaire filled out online, with evaluation, topics and proposals for improvement of the workshop

5.2 A thorough list of questions and methods of approach for starting a sustainable conversation with a struggling colleague is saved in the records of the workshop.

6 Actions and follow up

- ► Out of the workshop questionnaire
  - • The awareness of the value of approaching and colleague with mental health issue and how to do it in the proper manner was verified
  - • The value of EffEff communication was highlighted for IF EffEff operation of a team
  - • We will continue to work on these workshops and the communication and mental health concepts introduced to ensure that the equation take care about myself = take care of my team is clearly understood and is driving our behaviour to ensure IF EffEff operations for our team.
- ► Out of the workshop evaluation following is concluded:
  - • The vast majority of the participants were happy with the content and the duration of the workshop.
  - • In some cases it was requested
    - more clarity in some questions
    - better contact with the facilitator
- ► There was a clear demand for physical meetings and opportunity to have live interactions with the facilitators and the Managing Director.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

2 Workshop: Take care of myself and my team – Leading my team's wellbeing

The "Take care of myself and my team" workshop is introduced since Jun18, is elaborating on actual accidents(different scenarios), passing the message Take Care of myself = Take Care of my team, help each other to perform IF EffEff and all return Home Healthy.
This workshop is now further developed to the "Take care of myself and my team, Leading my team's wellbeing", with focus on the Shell Pns Leadership Skills for Crew Wellbeing module, designed for us to elaborate on the why:

- ***a leader's, and a team's member, key priority is his team's wellbeing***
- ***a fearless organisation, where all feel comfortable to share their success and failures and are open to learn from each other, is prerequisite for a team's wellbeing***

and relate the Roxana 3x3x3 soft skill model, and particularly EffEff communication, the human performance principles and how the qualities of a leader or a team member are applied to ensure his and his team's wellbeing and IF EffEff operations.
The related questionnaire is a tool for each individual, in any role, to understand:

- ***the level of his understanding on the wellbeing topics of the workshop***
- ***how HE feels fearful and open to contribute to his team's wellbeing (self assessment)***
- ***his own perception on how his leader and his team are boosting the fearless organisation for the well being (360^0 assessment) .***

1 Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop "Take care of myself and my team – Leading my team's wellbeing" and for:

- ► the prompt and proper fill in of the questionnaire
- ► your further proposals to improve the way we lead our team's wellbeing.

2 Background

2.1 The "Take care of myself and my team" workshop is introduced since Jun18, based on the relevant PnS resilience modules and is elaborating on actual accidents(different scenarios), passing the message Take Care of myself = Take Care of my team, help each other to perform IF EffEff and all return Home Healthy.
This workshop is now further developed to the "Take care of myself and my team, Leading my team's wellbeing", with focus on the Shell Pns Leadership Skills for Crew Wellbeing module.

2.2 Based on

- ► the 4 modules of Shell PnS Resilience vol1, in Russian also, Change is a Part of Living, Looking at Situations in a Different way, Take care of yourself, Take Decisive Action
- ► Leadership Skills for Crew Wellbeing Shell PnS module
- ► the Roxana "Fearless Ego for Success" concept
- ► the Roxana 3x3x3 soft skills model

this workshop has been developed for Captains and Chief Engineers to help them develop their leadership skills in order to create a learning culture and transparency in workplace where crew feel confident to talk about health and wellbeing. However the same concepts apply for any leader or team member of any team and team's wellbeing (health, physical and mental).

2.3 During the "Take care of myself and my team, Leading my team's wellbeing" workshop the facilitator and his team had the opportunity to elaborate on the Leadership Skills for Crew Wellbeing, based on the 3 video modules in information onsite, running the videos offline as well elaborating on what sort of leader is required to best manage the well being of his team, by creating:

- ► a workplace where the well being of the team is one of the key priorities
- ► an environment of open and without fear communication

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

3 Purpose

This workshop is designed for us to:

- ► elaborate on the fact that a leader's, and a team's member, key priority is his team's wellbeing.
- ► A fearless organisation, where all feel comfortable to share their success and failures and are open to learn from each other, is prerequisite for a team's wellbeing
- ► relate the Roxana 3x3x3 soft skill model, and particularly EffEff communication, the human performance principles and how the qualities of a leader or a team member are applied to ensure his and his team's wellbeing and IF EffEff operations.

The related questionnaire is a tool for each individual, in any role, to understand:

- ► the level of his understanding on the wellbeing topics of the workshop
- ► how HE feels fearful and open to contribute to his team's wellbeing (self assessment)
- ► his own perception on how his leader and his team are boosting the fearless organisation for the well being (3600 assessment).

4 Key messages

Key messages of the course were passed on to the participants a leader, even a team member, is required to:

- ► best manage the well being of his team, not by intimidation, command and control, but by creating:
  - • a workplace where the well being of the team is one of the key priorities
  - • an engaging environment for open and fearless communication
- ► be emotionally fit, his emotional fitness is pre-requisite to manage his team well being, to ensure that:
  - • state of mental health of the individuals is assessed and managed
  - • the state of the team's well being in our environment can be assessed
  - • The AllLookListen (Feel) ActCheckbackTakecareofyourself principle applies to manage the mental health
- ► be aware of the principles of human performance, ie:
  - • Human errors happen, but they are opportunities to learn, blame fixes nothing
  - • Humans want to do a good job, humans are not to blame although reckless conduct is not tolerated
  - • Human error reflects to system error, systems to be continually revised to be more error tolerant, and more engaging, considering that context drives behavior

5 Records

Concluding the workshop

- ► the relevant questionnaire was filled out online, verifying the knowledge obtained and keeping a record of each one's personal commitments.
- ► the evaluation questionnaire filled out online, with evaluation, topics and proposals for improvement of the workshop

6 Actions and follow up

- ► Out of the workshop questionnaire following is concluded:
  - • The vast majority of our colleagues feel comfortable to share their failures and success with their team and are ready to learn from each other
  - • EffEff communication is still a challenge, with room for improvement
  - • our organisation is in a steady course, in line with our IDEA Vision, towards a fearless organisation

  we will then restlessly work in providing the context that a fearless organisation can flourish for the sake of our wellbeing and IF EffEff operations.
- ► Out of the workshop evaluation following is concluded:
  - • The vast majority of the participant were happy with the content and the duration of the workshop.
  - • In some cases it was requested
  - • more clarity in some questions, better contact with the facilitator
  - • better contact with managing Director for clarifications
  - • There was a clear demand for physical meetings and opportunity to have live interactions with the facilitators and the Managing Director.
- ► All going well we plan for next Dec engagements to be physical meetings.
- ► All above issues will be considered for the next remote workshops, since these issues are not applying to physical meetings.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

3 Workshop: Learner mindset

The Learner Mindset is a skill set introduced as a tool for everyone to grow their ability to share and learn from mistakes and successes and speak up openly in a safe environment.
This workshop is designed for us to introduce the Learner Mindset as a tool towards the fearless organization, where all of us are open to admit failures, acknowledge success, ask, learn and improve.
The relevant questionnaire is developed for each one to:

- ***Verify the awareness of the Learner mindset concept***
- ***evaluate to what extend he is performing on Learner's mindset (self evaluation)***
- ***evaluate to what extend his peers, his superiors and the organisation is performing on learner's mindset (360^0 assessment).***

1 Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop " Learner mindset" and for:

- ► the prompt and proper fill in of the questionnaire
- ► your further proposals and feedback, evaluating the workshop in terms of more to learn, most impact
- ► recording your personal commitments for next day actions so that you consistently adopt the Learner's mindset in your everyday life.

2 Background

2.1 In the "Learner Mindset" workshop we had the chance to elaborate on:

- ► The Roxana "Fearless Ego for Success" concept, representing Company Governance, particularly , the most important ego, the 3 Human performance principles, the reflective learning engagements, the Fair and Just for no Blame culture, as boosting an environment where all of us feel comfortable to speak up and learn from failures and successes.
- ► the Company IDEA vision, as introduced since 2019, consolidating the core values when conducting business, particularly Innovation and thinking outside the box, Dialectic in respecting diversities and harmonizing opposite ideas, Excellence in reaching where you cannot, Aristocracy in modesty are some of the core values adopted.
- ► the Communication for Resilience and Care, and the Communication for success workshops, based on the Resilience and Leading my team well being modules of Shell PnS, highlighting the value of the communication skills set for a team to perform in a fearless environment
- ► our revised Communications policy and process, as introduced in Jun19, along with the Roxana 3x3x3 soft skills model, incorporating the communications skills as pre-requisite for IF EffEff performance for a team leader and a team member.
- ► the Shell Pns introduced Learner Mindset, as a tool for everyone to grow their ability, learn from mistakes and successes and speak up openly in a safe environment.

3 Purpose

3.1 This workshop is designed for us to introduce the Learner Mindset as a tool towards the fearless organization, where all of us are open to admit failures, acknowledge success, ask, learn and improve.

3.2 The relevant questionnaire is developed for each one to:

- ► Verify the awareness of the Learner mindset concept
- ► evaluate to what extend he is performing on Learner's mindset (self evaluation)
- ► evaluate to what extend his peers, his superiors and the organisation is performing on learner's mindset (3600 assessment).

4 Key messages

Key messages of the course were passed on to the participants, ie the Learner Mindset is:

- ► pre requisite for the IDEA vision values of the Company
- ► Facilitating tool for the Mission statement of the Company
- ► Going along with a fearless environment, grown in the Fair and Just for No Blame culture

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

5 Records

5.1 Concluding the workshop

- ► the relevant questionnaire was filled out online, verifying the knowledge obtained and keeping a record of each one's personal commitments
- ► the evaluation questionnaire was filled out online, with evaluation, topics and proposals for improvement of the workshop

5.2 Based on the questionnaire responses and related to:

- ► adopting the Learner Mindset vs the Fixed Mindset in our working environment the Learner mindset is reported prevailing, as follows:

Learner	Myself (%)		Superior (%)		Master (%)		Organization (%)	
mindset	LM	50/50	LM	50/50	LM	50/50	LM	50/50
O	70	20	49	29	49	26	50	24
R	42	35	46	27	38	19	46	31

6 Actions and follow up

- ► Out of the workshop questionnaire we will continue to:
  - • focus on developing a fearless environment for the Learner Mindset to thrive
  - • advocate the Learner Mindset for the fearless organization to thrive
- ► Out of the workshop evaluation following is concluded:
  - • The vast majority of the participant were happy with the content and the duration of the workshop.
  - • In some cases it was requested
    - more clarity in some questions, better contact with the facilitator
    - better contact with managing Director for clarifications
  - • There was a clear demand for physical meetings and opportunity to have live interactions with the facilitators and the Managing Director.
- ► All going well we plan for Dec engagements to be physical meetings.
- ► All above issues will be considered for the next remote workshops, since these issues are not applying to physical meetings.

4 Workshop: How you respond matters

All of us at some point in time perform as team leader or team member and while performing in these roles we are faced with success or failures.
As per Roxana 3x3x3 soft skills model:

- ➢ ***a leader will apply his leadership / managerial skills and Decision making Result focus skills***
- ➢ ***a team member will apply his TeamWorking skills and Decision making Result focus skills***

This workshop

- ➢ ***elaborates on the fact that our response, particularly as a leader, to the everyday success or failures matters for the wellbeing of our team and for the IF EffEff completion of the tasks.***
- ➢ ***relates the Roxana 3x3x3 soft skill model, the human performance principles and how the qualities of a leader or a team member are applied in responding to everyday challenges, to ensure his and his team's wellbeing and IF EffEff operations.***

The related questionnaire is a tool for each individual, in any role, to understand:

- ➢ ***how HE responds matters for his team wellbeing and IF EffEff operations***
- ➢ ***his own perception on how his leader and his team respond to everyday challenges.***

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

1. Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop " How you respond matters" and for:

- ► the prompt and proper fill in of the questionnaire
- ► your further feedback evaluating the workshop in terms of more to learn, most impact
- ► recording your personal commitments for next day to improve your response for your team's well being.

2. Background

In the "How you respond matters" workshop we had the chance to review the latest references on:

2.1 Industry Soft skills, behavioral competency and human performance particularly:

2.1.1 OCIMF - Energy Institute – Partners in Safety

- ► OCIMF ITK Behavioral Competency Assessment and Verification for Vessel Operators was published 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 skills.
- ► OCIMF Human Factors Approach was released in Oct20 and outlines how human factors should be integrated into Industry activities. A set of guiding principles for human performance are introduced and one of the 8 principles is that leaders contribute in shaping conditions that influence what people do.
- ► Energy institute "Making compliance easier" was published Feb20, adopting the Todd Kronklin's 5 principles of human performance, acknowledging that everyone makes mistakes, performance may be compromised by factors like complexity of a task, distraction and repetition and that "How you respond to failure matters. How leaders act and respond counts".
- ► Partners in Safety release in Mar20 the PnS Human performance 1 and 2, adopting also the Todd Kronklin's 5 principles of human performance.

2.2 Roxana Soft skills, behavioral competency and human performance particularly:

2.2.1 Take care of myself and my team, Leading my team's wellbeing

This program was introduced in our system learning engagements in Jun20 inspired by the Leadership Skills for crew wellbeing, released by Shell in Jun20.

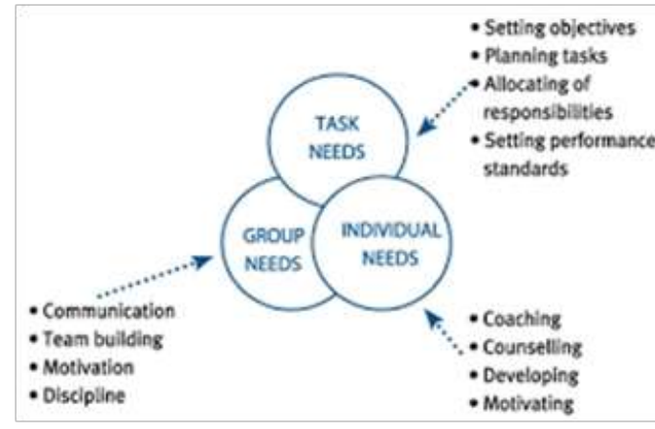
As key messages from this workshop a leader is required to:

- ► best manage the well being of his team, not by intimidation, command and control, but by creating:
  - • a workplace where the well being of the team is one of the key priorities
  - • an engaging environment for open and fearless communication
- ► be emotionally fit, his emotional fitness is pre-requisite to manage his team well being, to ensure that:
  - • state of mental health of the individuals and the team is assessed and managed
  - • The AllLookListen (Feel) ActCheckbackTakecareofyourself principle applies to manage the mental health
- ► be aware of the 3 principles of human performance:
  - • Human errors happen, but they are opportunities to learn, blame fixes nothing
  - • Humans want to do a good job, humans are not to blame although reckless conduct is not tolerated
  - • Human error is opportunity for system improvement, systems (software, hardware, environment) to be continually revised to be more error tolerant, and more engaging, considering that context drives behavior

2.2.2 Leadership and the Adair model

This workshop was introduced with MR2021-02 relating the Adair model with the Roxana 3x3x3 soft skills model. Adair's concept asserts that the three needs of task, team and individual are the watchwords of leadership, as people expect their leaders to help them achieve the common task, build the synergy of teamwork, and respond to individuals' needs.

The relevant questionnaire is a self assessment tool for each individual to understand his own perception on his Leadership profile and included behaviors of a leader responding to bad and good happenings.



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2.2.3 The Roxana 3x3x3 soft skils model

Based on the OCIMF ITK Behavioral Competency Assessment and Verification for Vessel Operators, by fusing communication and influencing skills to Teamworking and Leadership and managerial skills, and by merging Decision Making and Result focus skills and fusing into the merged skills set the Situation awareness skills we launched in Dec18 the Roxana 3x3x3 soft skills model, introducing

- ► 3 soft skills sets domains
  - • Team Working
  - • Leadership and Managerial
  - • Decision making and Result focus

2.2.4 The Human performance principles – Fair and Just for No Blame culture

We introduced in Dec20 in CMSM ch3.5

- ► the Roxana three human performance principles,
  - • Humans err
  - • Humans want to do a good job
  - • Human error is opportunity for system improvement
- ► The Fair and Just for No Blame culture

A Fair and Just culture soaked with these 3 human performance principles has to be a No Blame culture

2.3 Partners in Safety (PnS) "How you respond matters"

Along with the 2021 CEO conference in Mar21 PnS introduced the "How you respond matters" module.

It consists of two videos reflecting leader behaviors and prompts participants to realize 10 tips on the proper response and 9 personal characteristics both for a great Safety Leader.

3. Purpose

All of us at some point in time perform as team leader or team member and while performing in these roles we are faced with success or failures.

This workshop is designed for us, to:

- ► elaborate on the fact that our response, particularly as a leader, to the everyday success or failures matters for the wellbeing of our team and for the IF EffEff completion of the tasks.
- ► relate the Roxana 3x3x3 soft skill model, the human performance principles and how the qualities of a leader or a team member are applied in responding to everyday challenges, to ensure his and his team's wellbeing and IF EffEff operations.

The related questionnaire was a tool for each individual, in any role, to understand:

- ► the level of his understanding on the topics of the workshop
- ► how HE responds to everyday challenges (self assessment)
- ► his own perception on how his leader and his team respond to everyday challenges.

4. Key messages

Key messages of the "How you respond matters" model were passed over to the participants as follows:

- ► Leaders set the tone. They influence the conditions in which work takes place as well as the level of social engagement, interaction and support. Leaders that effectively manage the wellbeing of their crew will enhance the culture on board and create an environment where crew actively contribute to the safety and success of vessel operations.
- ► When responding to failures and success, particularly as a leader, we should
  - • respect the 3 human performanace principles, for the wellbeing of our team and for the IF EffEff completion of the tasks.
  - • relate the Roxana 3x3x3 soft skill model and how the qualities of a leader or a team member are applied in responding to everyday challenges, to ensure our and our team's wellbeing and IF EffEff operations.

5. Records

Concluding the workshop

- ► the relevant questionnaire was filled out online, verifying the knowledge obtained and keeping a record of each one's personal commitments
- ► the evaluation questionnaire was filled out online, with evaluation, topics and proposals for improvement of the workshop

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6. Actions and follow up

- ► Out of the questionnaire responses:
  - the level of understanding of the topic of the workshop is very satisfactory for all participants.
  - The self assessment responses identified the that the qualities of a safety leader and his response to failure are in general met, improvement is needed for the "learning from success" and "Remember you are being watched so be sure to be seen responding to things right".
  - The No Blame culture prevails in our system, however the shifting from the individual error to the system error still needs to be more carefully addressed.
  - All participants were committed to apply the learnings of this workshop and improve their response to failures as team leaders or team members.
  - Related to the feed back section of the questionnaire we will continue to focus on developing a fearless environment for IF EffEff operations for the individual and the team.
- ► Out of the course evaluation questionnaire responses all participants reported fully satisfied, without any additional request.

5 Workshop: FOM01 Bridge Team management revision RoKcs Mar22

1 Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop " FOM01 revision" and for your contribution to the improvement of the next FOM01 release.

2 Background

2.1 Inspired by the TMSA3 release 2017 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. CMSM ch3 par3.11.3 is revised with DMS revisions Jun20 to reflect above.

2.2 OCIMF ITK Behavioural Competency Assessment and Verification for Vessel Operators was released in Nov18, introducing the 6 soft skills categories in conducting HSQE incident free operations, effectively and efficiently. With workshops throughout 2018 and 2019 we modify the 6 soft skill domains to 3 and introduced the Roxana 3x3x3 soft skills model categories ending up to 3 soft skills sets:

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

2.3 Considering that all of us on board act as a team and each individual at some point in time acts as leader or member of a team, and as a first step to incorporate soft skills into our procedures we introduced the concept of the 3 teams (leading, deck, engine) as per CMSM ch3 par3.7.3 and we have introduced and documented in each procedure:

- ► categorization of tasks for each role as team leader, team member and in watch (watchkeeping or supervising physically or attending throughout the operation).
- ► The 3 teams, per procedure, operation or process, as function and tasks

2.4 Following:

- ► the introduction of the three pillars (CPAR, MoC, RM) and engagement (CMSM ch 3.4)
- ► the SHELL model introduction (Software, Hardware, Environment, Liveware, Liveware (me)) (CMSM ch 3.6)
- ► the recent training courses in Headoffice on Incident Investigation, particularly on investigation team, interview and causation analysis (CP08 new par. 3.7, 4.4.6 and revised 4.5 respectively)

we applied above principles to FOM01 Bridge team management introducing:

- ► completely revised par3
- ► restructured par4 with new paragraphs
  - Bridge organization – BRM
  - Types and Phases of Navigation
  - Terms and Procedures
  - Condition monitoring, maintenance and repairs
  - Reflective learning, training and drills
  - Incidents reporting, investigation, analysis, corrective and preventive actions (CPARs)
  - Risk management, Management of change, Non routine Navigation operations
  - par4.5.8.7 Look Ahead Zone was rewritten for Danger Detecting Vector and Sector systems DDV safety frame and DDS anti-grounding cone

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3 Purpose

This workshop has aim to collect group comments on the existing FOM01, that are going to be taken into account and assessed by the company, for the next FOM01 revision, in an effort to revise procedures and improve practices, to achieve our targets for HSQE incident free, effective and efficient operations.

4 Key messages

Key messages of the "FOM01 revision" module were passed over to the participants so that they focus to:

- ► Par3 and the "in watch" duties of each role
- ► Par4.18 the table with threats and measures, additional threats like proper planning or proper execution or proper supervision and proposed measures
- ► Par4.20 non routine operations and propose any other non routine operation
- ► Par4.2.7 Bridge team fatigue
- ► Par4.2.17 Decision making
- ► Par4.5 Use of ECDIS
- ► Par4.6 Voyage plan

5 Records

Records of the workshop were kept for further action.

6 Actions and follow up

Suggestions provided, will be considered for the next FOM01 revision.

6 Workshop: FOM10 maintenance revision RoKcs Mar22

1 Appreciation

Thank you all, 77 senior and junior officers and 36 ratings, for your reflective learning engagements in the workshop " FOM10 revision" and for your contribution to the improvement of the next FOM10 release.

2 Background

2.1 Inspired by the TMSA3 release 2017 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.

- ► CMSM ch3 par3.11.3 is revised with DMS revisions Jun20 to reflect above.

2.2 OCIMF ITK Behavioural Competency Assessment and Verification for Vessel Operators was released in Nov18, introducing the 6 soft skills categories in conducting HSQE incident free operations, effectively and efficiently. With workshops throughout 2018 and 2019 we modified the 6 soft skill domains to 3 and introduced the 3x3x3 model in soft skills categories ending up to 3 soft skills sets:

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

2.3 Considering that all of us on board act as a team and each individual at some point in time acts as leader or member of a team, and as a first step to incorporate soft skills into our procedures we introduced the concept of the 3 teams (leading, deck, engine) as per CMSM ch3 par3.7.3 and we have introduced and documented in each procedure

- ► categorization of tasks for each role as team leader, team member and in watch (watchkeeping or supervising physically or attending throughout the operation).
- ► The 3 teams, per procedure, operation or process, as function and tasks

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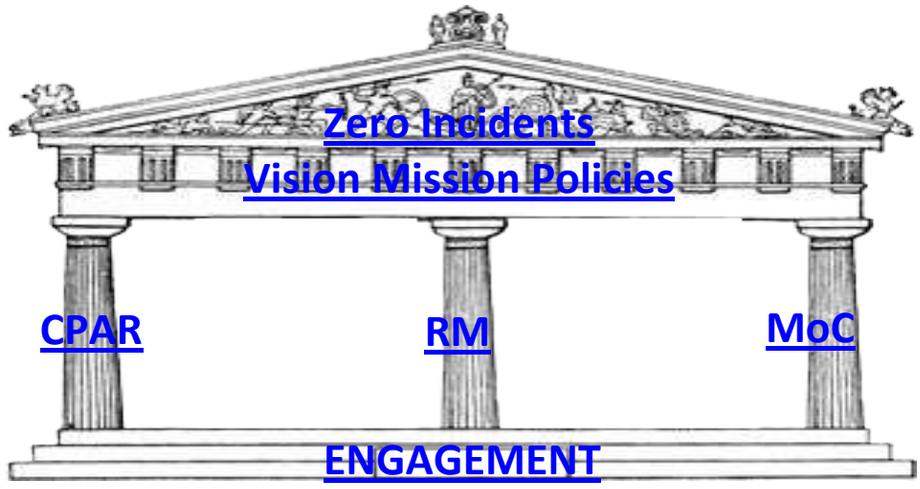
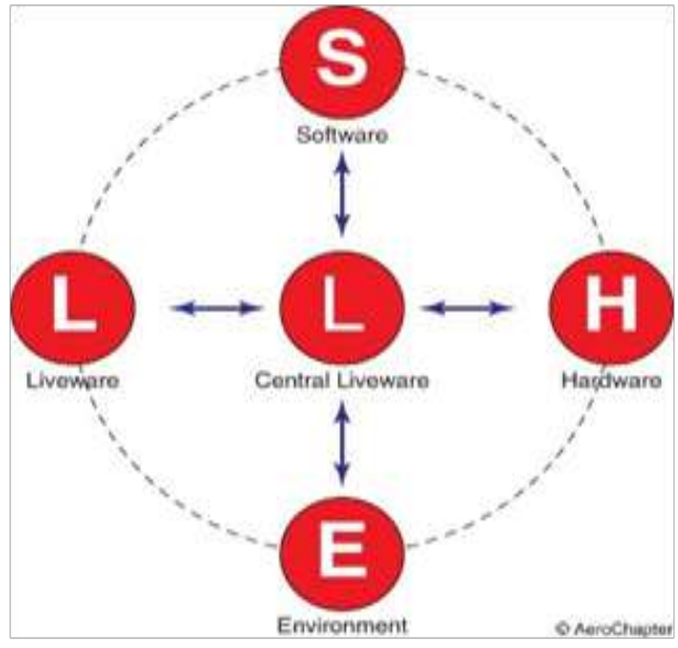
Following:

► the introduction of the three pillars (CMSM ch 3.4)



► the S.H.E.L.L. model (CMSM ch 3.6)



► the recent training courses in Headoffice on Incident Investigation, particularly on investigation team, interview and causation analysis (CP08 new par. 3.7, 4.4.6 and revised 4.5 respectively)

► we applied above principles to FOM10 Maintenance and we sent the 1st draft to the fleet for comments on 11Nov21, based on the feedback we released FOM10 with DMS release Dec21 introducing:

► Procedure re-written to the new format incorporating in

• section3 the soft skills

• section 4 the three pillars (CPAR, MoC, RM), the reflective Learning, Training and drills, the non routine operations.

3 Purpose

This workshop has aim to collect group comments on the existing FOM10, that are going to be taken into account and assessed by the company, for the next FOM10 revision, in an effort to revise procedures and improve practices, to achieve our targets for HSQE incident free, effective and efficient operations.

4 Key messages

Key messages of the "FOM10 revision" model were passed over to the participants as follows:

Each group were requested to :

(60minutes) suggest revisions with track changes in the records folder, particularly on the:

► Par3 and the "in watch" duties of each role

► Par4.22 the table with threats and measures, additional threats like proper planning or proper execution or proper supervision and proposed measures

► Par4.23 non routine operations, 4.23.1 up to 4.23.8 and propose any other non routine operation

5 Records

Records of the workshop were kept for further action.

6 Actions and follow up

Suggestions provided, will be considered by Company for the next FOM10 release.

Tanker/Bulker senior and junior Officers/Ratings remote learning engagement courses Mar22

BULKERS GROUPS

Gr 1

Name	rank	role
Levchanin Oleg	Master	Facilitator
Lukianov Stanislav	ChOff	Flipchart
Kardopoltcev Mikhail	ChOff	Presenter
Tarapaka Sergey	ChEng	PC operator
Danilov Evgeny	2nd eng	
Senotrusov Evgeny	2nd eng	

TANKERS GROUPS

Gr 1		Gr 2		Gr 3		
Name	rank	Name	rank	Name	rank	role
Shtyrba Dmitrii	ChOff	Khristovich Timofey	Master	Rarov Valentin	ChOff	Facilitator
Maltcev Dmitrii	Master	Karasev Leonid	Master	Niukhin Sergei	ChOff	Flipchart
Khairullin Oleg	Master	Korotets Oleg	ChOff	Skribchenko Aleksandr	2nd off	Presenter
Tsayukov Ivan	ChOff	Kril Oleg	ChEng	Koshetov Igor	Master	PC operator
Okolo-Kulak Alexey	ChOff	Dolgopolov Igor'	ChEng	Zenenko Nikolay	Master	
Goncharov Konstantin	ChEng	Potianikhin Nikolai	2nd eng	Sergeichev Aleksei	ChEng	
Triakin Andrei	ChEng	Artamonov Vladimir	2nd eng	Shumkov Anton	ChEng	
Mayorov Alexey	ChEng	Karabin Sergei	2nd eng	Lutonin Sergey	2nd eng	
Baykov Alexander	2nd eng	Vazhenin Maksim	2nd eng	Vangoven Sergei	2nd eng	
Efimov Andrei	2nd eng			Avdeev Roman	2nd eng	

RATINGS TANKERS GROUPS

Gr 1		Gr 2		Gr 3		
Name	rank	Name	rank	Name	rank	role
Kostyukevich Sergey	3rd off	Kurakin Vitalii	3rd off	Machtakov Artem	3rd off	Facilitator
Rosseikin Viktor	Bosun	Plekhanov Vladimir	Bosun	Semenik Vladimir	A/B	Presenter
Shatoba Igor	Bosun	Grechishnikov Aleksandr	Bosun	Koltsov Evgenii	A/B	PC operator
Kadanin valerii	Bosun	Belousov Artur	A/B	Mertsalov Oleg	A/B	Flipchrt
Bokov Ilya	A/B	Lisenkov Oleg	A/B	Rozhkov Vladimir	A/B	

RATINGS BULKERS GROUPS

Gr1

Name	rank	role
Gladkikh Viktor	2nd off	Facilitator
Shurinov Vladimir	Bosun	Presenter
Bobkov Iurii	Bosun	PC operator
Gorbenko Sergei	A/B	Flipchrt
Gostiushov Valerii	A/B	
Bodriagin Vitalii	A/B	
Kravtsov Igor	A/B	

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CATERING STAFF GROUPS

Gr 1		Gr 2		Gr 3		
Name	rank	Name	rank	Name	rank	role
Sokunov Mikhail	Cook	Lednev Viktor	Cook	Gorbach Andrei	M/man	Facilitator
Makarishin Vladimir	Cook	Manakhov Igor	Cook	Diyakonu Fedor	Cook	Presenter
Bogdan Yanis	M/man	Nikolaenko Vladimir	Cook	Sedin Daniil	M/man	PC operator
Borisenko Igor	Cook	Ivanenko Denis	M/man	Kikot Nikolai	cook	Flipchrt
Lobastov Aleksei	M/man	Kiriuta Nikolai	M/man			

JUNIOR TANKERS GROUPS

Gr 1		Gr 2		Gr 3		
Name	rank	Name	rank	Name	rank	role
Tsys Ilya	2nd off	Pushkar Sergei	2nd off	Makarevich Kirill	2nd off	Facilitator
Iakovlev Anton	2nd off	Kulbida Igor	2nd off	Shpak Konstantin	2nd off	Flipchart
Minchik Evgeny	3rd off	Grechko Mikhail	3rd off	Kostyukevich Sergey	3rd off	Presenter
Litvinov Nikita	3rd off	Lapshov Roman	3rd off	Migal Pavel	3rd off	PC operator
Maslennikov Vlad	4th off	Emelianov Anton	3rd off	Danin Nikolai	3rd off	
Lavrenov Evgenii	4th off	Protasov Konstantin	4th off	Yugai Stanislav	3rd eng	
Vorozhchenko Andrei	3rd eng	Fedorov Vadim	4th off	Prokhorikhin Maksim	4th off	
Bacharnikov Sergei	3rd eng	Guzeev Anatolii	4th off	Prokopenko Aleksandr	4th eng	
Babenko Sergei	3rd eng	Samankov Viacheslav	3rd eng	Lisanov Dmitrii	4th eng	
Rudikov Pavel	4th eng	Karablin Vladislav	4th eng	Zhukov Ilia	5th eng	
Pozigun Egor	4th eng	Somov Vladimir	4th eng	Vysotskikh Evgenii	5th eng	
Maslennikov Vlad	4th off	Pidzhakov Andrei	5th eng			

JUNIOR TANKERS GROUPS

Gr 1		Gr 2		Gr 3		
Name	rank	Name	rank	Name	rank	role
Sokolov Mikhail	3rd off	Pritulin Aleksandr	2nd off	Kovalenko Victor	2nd off	Facilitator
Golik Vadim	3rd eng	Gladkikh Viktor	2nd off	Lesov Dalel	3rd off	Presenter
Sergeenko Iurii	4th eng	Zaborovskiy Yury	3rd eng	Lazarev Alexey	3rd eng	PC operator
Zatrutin Evgenii	4th eng	Lialin Matvei	4th eng	Zadorozhnyi Dmitrii	3rd eng	Flipchrt

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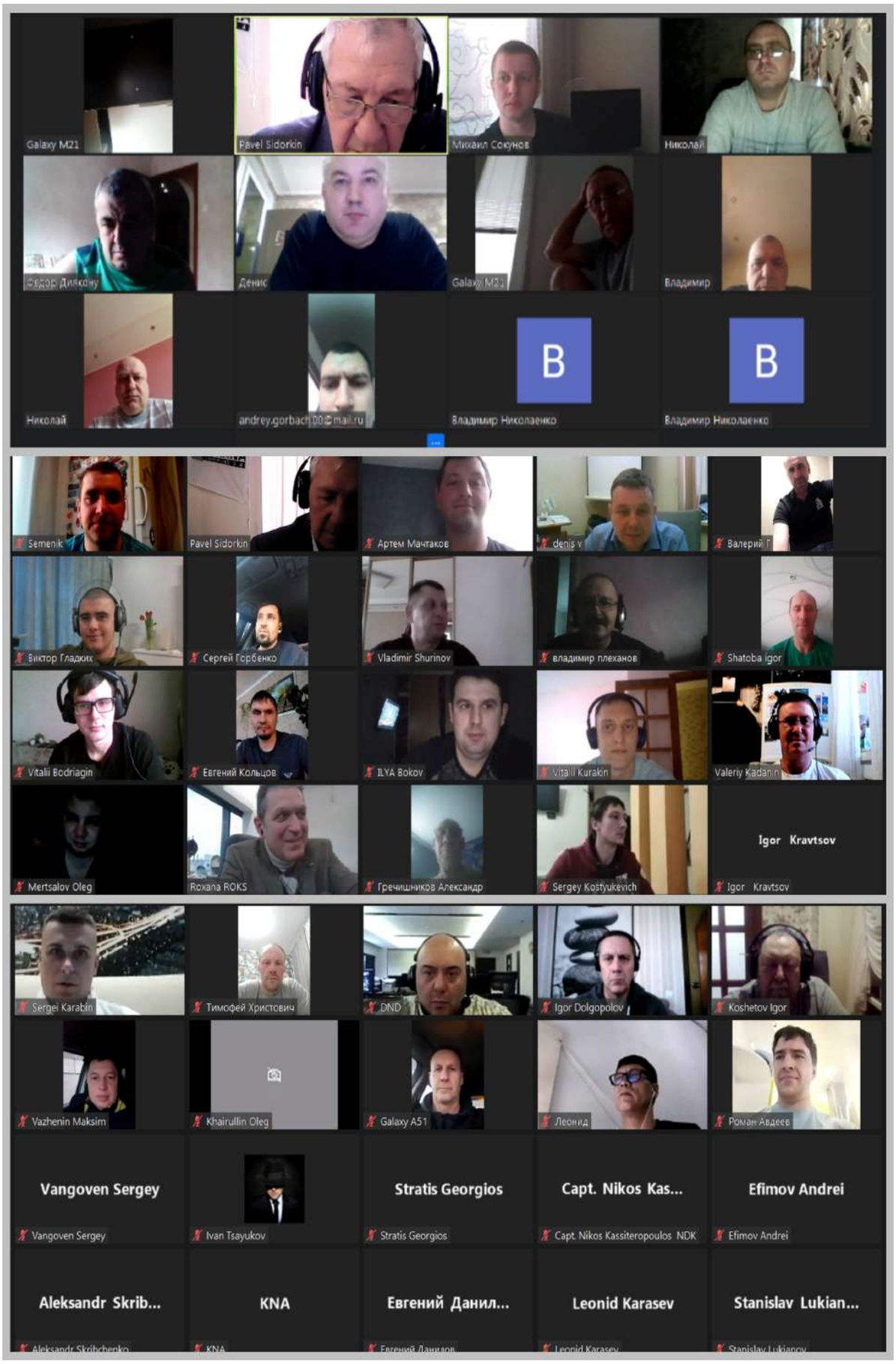

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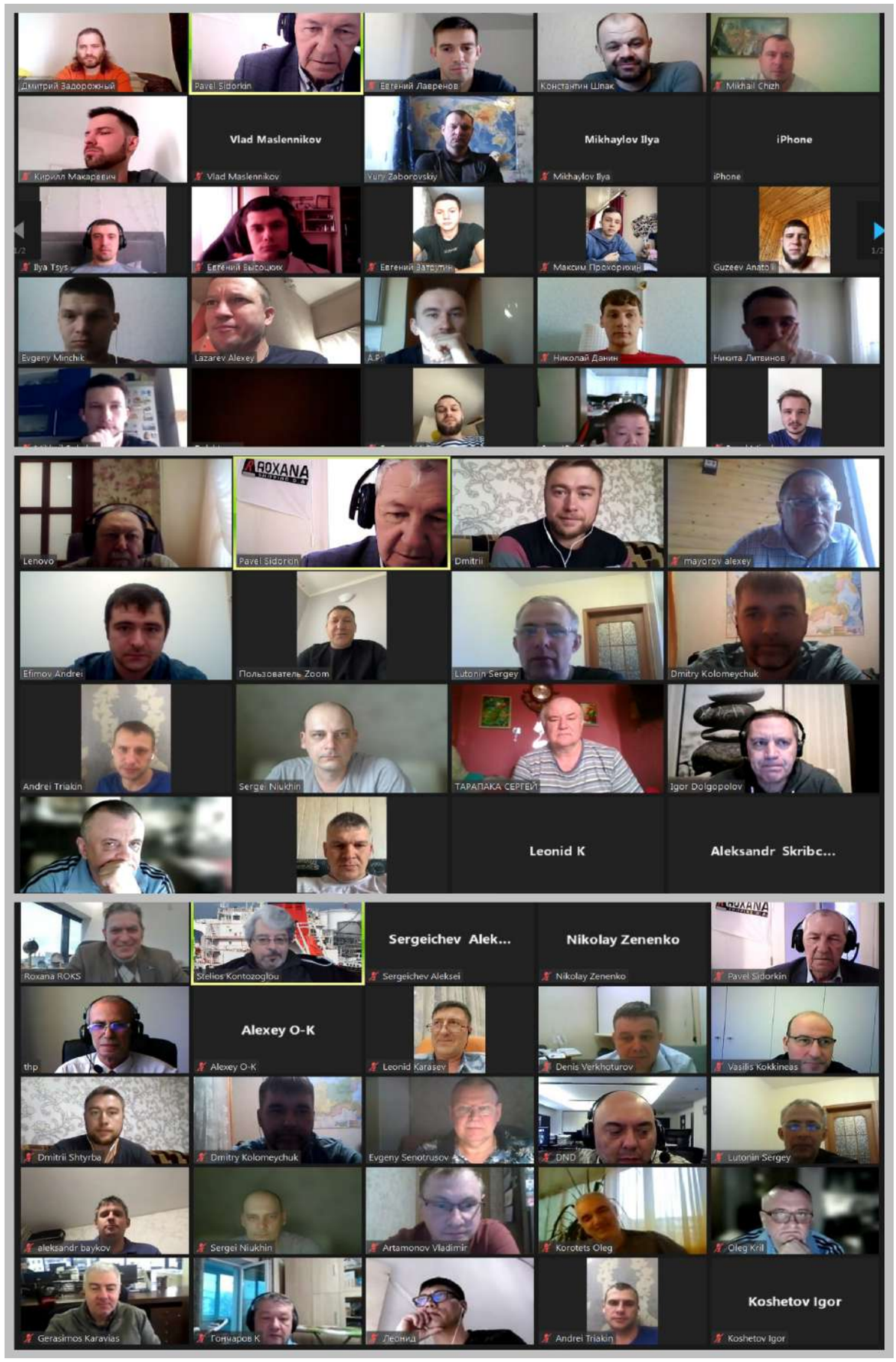


Pancoast Trading (Singapore) Pte. Ltd. Update 01Jan22- 31Mar22

Pancoast Trading (Singapore) Pte. Ltd is continuing its strong commercial activities in the East of Suez region. The office in Singapore is strategically located covering the vital market of Indian and Pacific Ocean.

Pancoast's tanker activities has successfully completed 8 years in tankers activities having a vital market presence in this region; The office representing Roxana Tanker Pool is now well known in the tanker segment. The commercial activities of the office on behalf of Roxana Tanker Pool have an exceptional increasing activity from 2014 when it started the tanker desk. The Singapore Office will continue to have a very dynamic and challenging period ahead with all of the spot vessels in East.

Vessels operated by the office during this period included Miracle, Melody, Marvel, Magic and Malbec which are Handy Vessels in Dirty product trade.

Fixtures: In 2022, Q1 Period: Pancoast office under commercial operational responsibility of Capt. Karthik were spot chartered with different Charterers including Oil majors. Also a long term Time charter were fixed during the period on one of our vessels.

Singapore still remains the main port in the East where almost all the ships call for various repairs, surveys and bunkering ops for which our department have assisted in their preparation and planning and giving logistics support to various departments. It is also important that we have our protective Agents Leth Incargo sharing the same office with us which makes it very efficient to coordinate for all of our owners matters in Singapore.

Covid19: Due to the pandemic; Business continuity plans were set up in place with remote meetings with clients and office attendance was kept at minimum with safe distancing for safety of employees.

Weekly Meetings: Roxana Tanker department weekly meetings are carried out every Thursday to discuss and co-ordinate vessel updates.

Management meetings: Capt Karthik participates in virtual meetings with Management team at Athens and discuss about the performance of the vessels managed by our our company.

Company Personal Training: Pancoast office also participated in the Company Training in regards to personal/human improvement.

Employee Roles:

- Capt. Karthik is heading the Singapore office of Pancoast Trading and is also in charge of the Commercial / operational activities of Pancoast Singapore as agent for Roxana in East of Suez market. Apart from his other diversified roles; he also is heading the fleet - Post Fixture / Claims department of Pancoast Singapore for the managed Tanker Vessels.

- Mr. Alexandros Stathopoulos; entered his 6th year as Tanker Operator; and plays vital role in day to day operational issues, assisting with Pre-Post Fixture / Claims and co-ordination with other departments.

We thank with all our heart our Seafarers on board during this difficult pandemic time for their resilience, strength and patience during this exceptionally difficult period.

VMC (Vladivostok Maritime College)

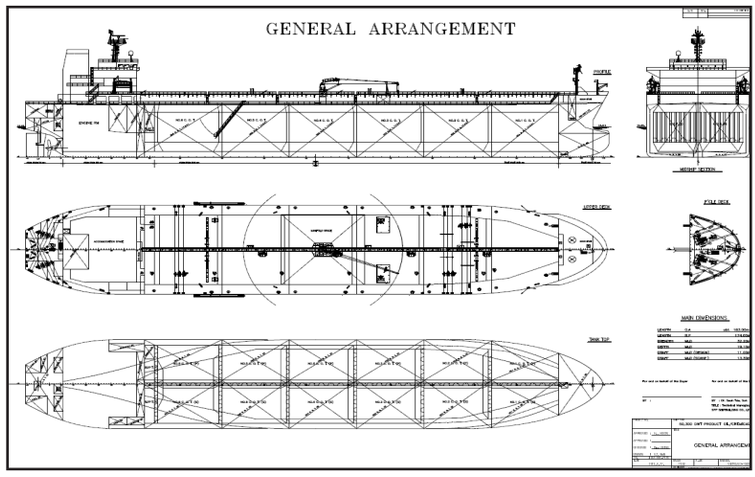
The laboratory "Ship high-voltage electric power systems"

VMC is proud to introduce as of beginning of 2022 the laboratory "Ship high-voltage electric power systems".
This laboratory is delivering training sessions in the area of operation of the main ship propulsion and power systems for the programs of higher and secondary vocational education and for supplementary training programs sea going officers.
This laboratory is opened jointly by the Vladivostok Maritime College and the Far Eastern Institute of Communications.
In the laboratory, real high-voltage equipment (based on the EasyPact EXE vacuum circuit breaker) are installed and put into operation.
Laboratory equipment are made in accordance with established demonstration methods and competency assessment criteria in accordance with Tables A-III/1 and A-III/2 of the STCW Code.
The laboratory is intended to prepare and assess students in the competence of "Operation of electrical equipment, electronic equipment and control systems", "Operation of electrical and electronic control equipment" vis a vis the required standard of competence in accordance with the STCW Code.

Our company is following the next generation of newbuildings and relevant new rules, particularly:

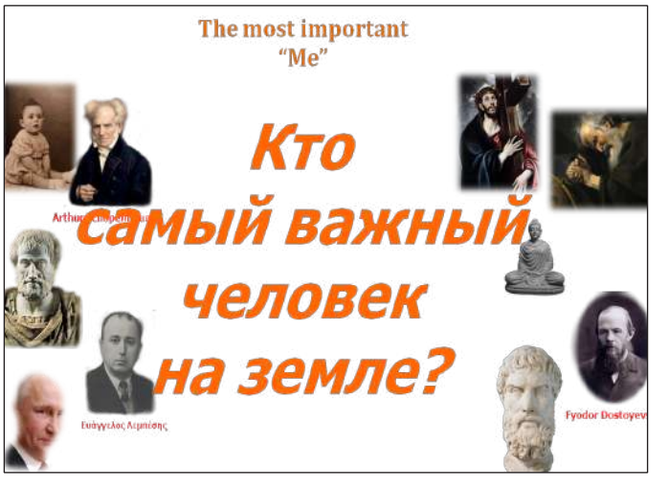
- LNG as propulsion fuel technology and availability network
- Alternative fuels
- Air emissions NOx and SOx control technologies and limits
- ECO designs and options

The next generation of newbuildings will be a challenge for the industry, particularly due to the evolution of LNG as marine fuel and the price level of the conventional and VLS/ULS fuel oil.



The fearless ego for success

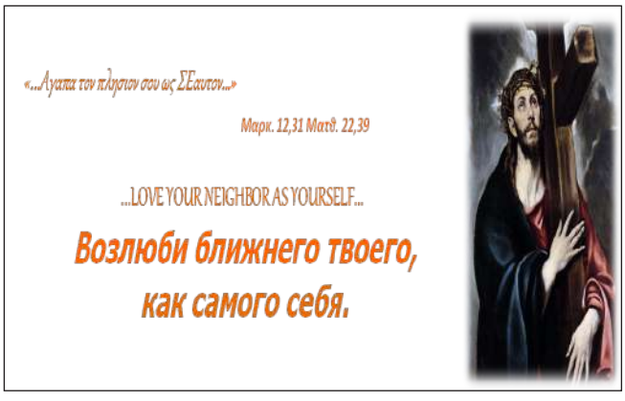
Inspired by the Partners in Safety project the Roxana "Ego" tree was launched end of 2016, finally introduced after the management review of May 2019 and was further developed to the Roxana "fearless ego for success" tree.
Each one of us elaborated on a basic question who is the most important person 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



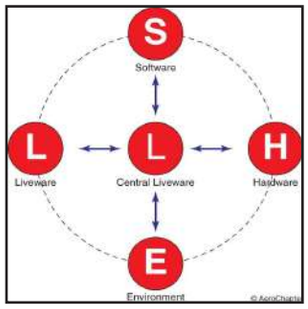
Based on this conclusion the principal order was introduced:

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.

The fearless ego for success (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)

Starting from the Roxana "fearless ego for success" concept we are developing our system in three axes of activity: the 3 Pillars and Engagement, the Human Performance and the Reflective Learning.

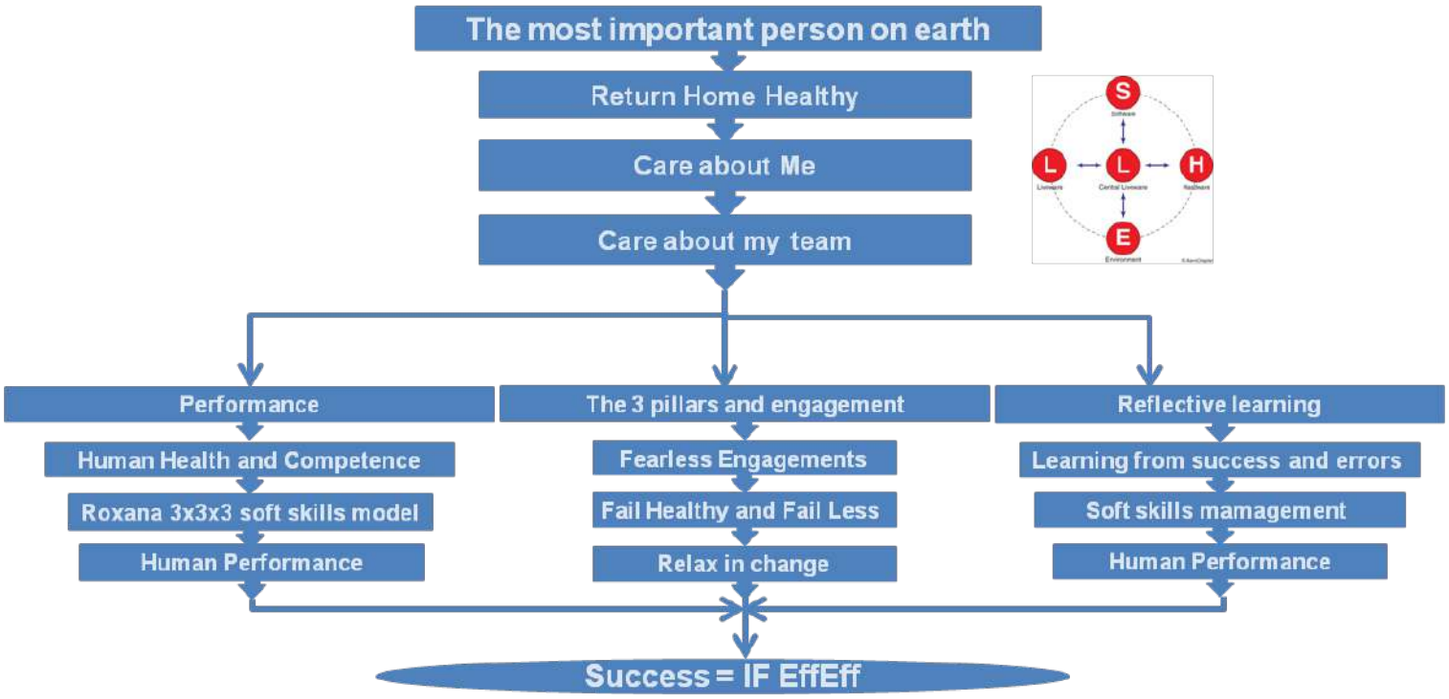
The 1st activity axis is addressing the Fearless engagements, the Risk management and the Management of Change as the three pillars, with engagement being the basement of our system, towards commitment to our Values and our policies for zero incidents.

The 2nd axis of activity elaborates with Health (physical and mental) and Competence (hard and soft) as pre-requisites for Performance, performance being the measure of Incident Free, Effective and Efficient (IF EffEff) operations.

The 3rd axis of activity is related to creating an open environment for reflective learning engagements for all levels in our organisation.

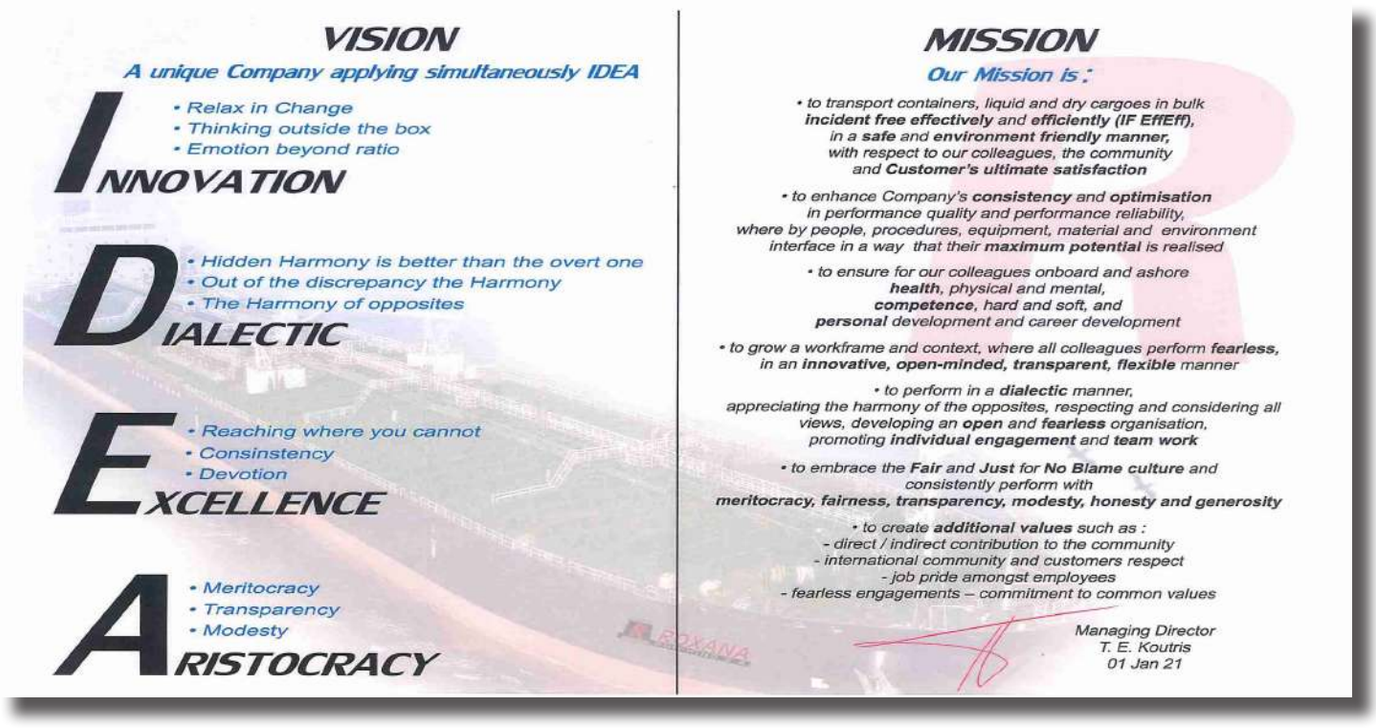
Separate articles in this magazine elaborate on the above three axes of activity, who ensure the Incident Free, Effective and Efficient (IF EffEff) operations throughout our organization ashore and on board.

Fearless Ego for Success



The 3 pillars and engagement

Late 2107 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.



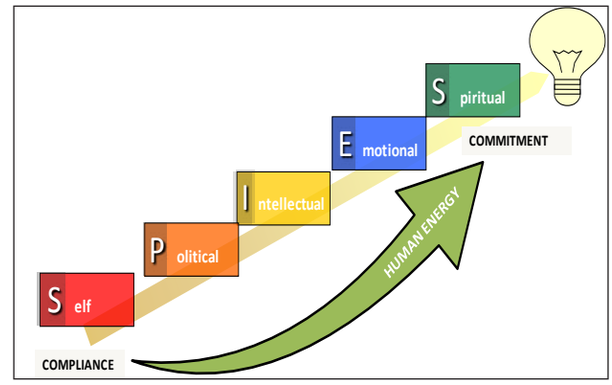
The three pillars were identified as

- **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 team with Dostoyevsky to make 2+2=5

Dostoyevsky'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.

Fyodor Dostoyevsky

ChIX.....

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 ταύτόν έστι τὰ μέρη καὶ τὸ ὅλον ...» (150a15-16).

"THE WHOLE IS NOT THE SAME AS ITS PARTS"

2000 year before Dostoyevsky 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!

Herakleitos team with Dostoyevsky to make 2+2=5 (Continued)

«...ΤΟ ΑΝΤΙΞΟΟΝ ΣΥΜΦΕΡΟΝ ΚΑΙ ΕΚ ΤΩΝ ΔΙΑΦΕΡΟΝΤΩΝ ΚΑΛΛΙΣΤΗΝ ΑΡΜΟΝΙΑΝ ...ΚΑΙ ΠΑΝΤΑ ΚΑΤ' ΕΡΙΝ ΓΙΝΕΣΘΑΙ...»
THE OPPOSITES ARE BENEFICIAL AND FROM THE DIFFERENTS THE BEST HARMONY...EVERYTHING IS DEVELOPED IN DISPUTE...

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

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 Dostoyevsky satisfied!

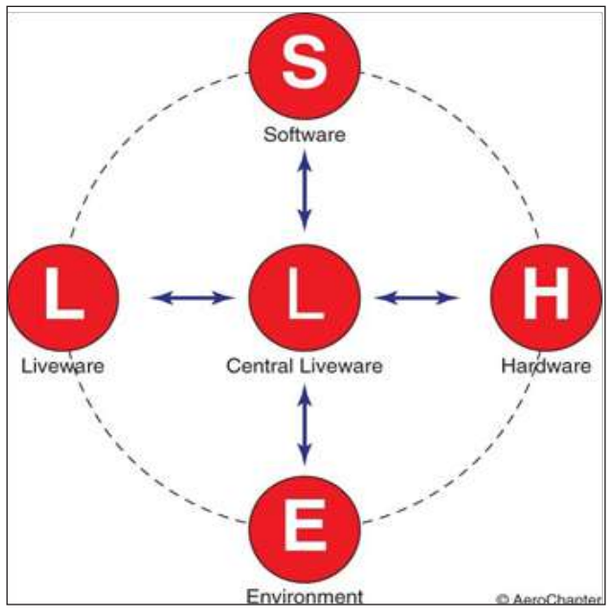
The 2+2=5 concept was developed while elaborating on the TeamWorking soft skills and facilitated our understanding of the added value of a team where differences are harmonized.
The teams concept is introduced

- **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.**

The S.H.E.L.L. model

The S.H.E.L.L. 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 S.H.E.L.L. 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 S.H.E.L.L. 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 S.H.E.L.L. model considers both active and latent failures in the aviation system.

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

The S.H.E.L.L. model is adapted to the Company DMS CMSM par3.6, and S.H.E.L.L. factors are extensively used when applying processes, amongst others, like the:

1 interview (interrelation of the candidate with S.H.E.L.L.)

► investigation (classification of factors to investigate in S.H.E.L.L.)

► causation analysis (classification of causes in S.H.E.L.L.)

► hazards and threats identification (classification of hazards and threats in S.H.E.L.L.)

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 below.

Since 2017 colleagues from all levels within the organization have been engaged in a series of workshops with the objective to incorporate, when applicable and if practical, in all critical operations the dimension of the soft competence, the soft skills.

Procedures format, as documented in CMSM ch3, as well as CP05 recruitment and appraisal process are revised to reflect the above.

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

How you respond matters

All of us at some point in time perform as team leader or team member and while performing in these roles we are faced with success or failures.
As per Roxana 3x3x3 soft skills model:
- ***a leader will apply his leadership / managerial skills and Decision making Result focus skills***
- ***a team member will apply his TeamWorking skills and Decision making Result focus skills***

This workshop
- ***elaborates on the fact that our response, particularly as a leader, to the everyday success or failures matters for the wellbeing of our team and for the IF EffEff completion of the tasks.***
- ***relates the Roxana 3x3x3 soft skill model, the human performance principles and how the qualities of a leader or a team member are applied in responding to everyday challenges, to ensure his and his team's wellbeing and IF EffEff operations.***

The related questionnaire is a tool for each individual, in any role, to understand:
- ***how HE responds matters for his team wellbeing and IF EffEff operations***
- ***his own perception on how his leader and his team respond to everyday challenges.***

1 Background

1.1 Soft skills, behavioral competency and human performance - Industry

1.1.1 OCIMF - Energy Institute – Partners in Safety

► OCIMF ITK Behavioral Competency Assessment and Verification for Vessel Operators was published 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 skills.

leaders contribute in shaping conditions that influence what people do

► OCIMF Human Factors Approach was released in Oct20 and outlines how human factors should be integrated into Industry activities. A set of guiding principles for human performance are introduced and one of the 8 principles is that leaders contribute in shaping conditions that influence what people do.

► Energy institute "Making compliance easier" was published Feb20, adopting the Todd Kronklin's 5 principles of human performance, acknowledging that everyone makes mistakes, performance may be compromised by factors like complexity of a task, distraction and repetition and that "How you respond to failure matters. How leaders act and respond counts".

► Partners in Safety release in Mar20 the PnS Human performance 1 and 2, adopting also the Todd Kronklin's 5 principles of human performance.

1.2 Soft skills, behavioral competency and human performance - Roxana

1.2.1 Take care of myself and my team, Leading my team's wellbeing

This program was introduced in our system learning engagements in Jun20 inspired by the Leadership Skills for crew wellbeing, released by Shell in Jun20.
The most recent workshop ashore was conducted in MR20-01 interim 12Feb21.
Workshop analytics may be found in following link:
https://docs.google.com/forms/d/1osMhIHVteNd5tiMUyHzgdTaAkCyBiHzOFw3-36Np3VE/viewanalytics

How you respond matters (Continued)

As key messages from this workshop a leader is required to:

► best manage the well being of his team, not by intimidation, command and control, but by creating:
- a workplace where the well being of the team is one of the key priorities
- an engaging environment for open and fearless communication

► be emotionally fit, his emotional fitness is pre-requisite to manage his team well being, to ensure that:
- state of mental health of the individuals and the team is assessed and managed
- The AllLookListen (Feel) ActCheckbackTakecareofyourself principle applies to manage the mental health

► be aware of the principles of human performance:
- Human errors happen, but they are opportunities to learn, blame fixes nothing
- Humans want to do a good job, humans are not to blame although reckless conduct is not tolerated
- Human error is opportunity for system improvement, systems (software, hardware, environment) to be continually revised to be more error tolerant, and more engaging, considering that context drives behavior

what applies to any leader and team on board, applies to any leader and his team ashore, and to all team members as well.

Leaders set the tone. They influence the conditions in which work takes place as well as the level of social engagement, interaction and support. Leaders that effectively manage the wellbeing of their crew will enhance the culture on board and create an environment where crew actively contribute to the safety and success of vessel operations.
How a leader responds in the everyday challenges matters, and is part of the effective management of his and his team's wellbeing.
And what applies to the Master and his crew or any leader and team on board, applies to any leader and his team ashore, and to all team members as well.

1.2.2 Leadership and the Adair model

This workshop was introduced with MR2021-02 relating the Adair model with the Roxana 3x3x3 soft skills model. Adair's concept asserts that the three needs of task, team and individual are the watchwords of leadership, as people expect their leaders to help them achieve the common task, build the synergy of teamwork, and respond to individuals' needs. The relevant questionnaire is a self assessment tool for each individual to understand his own perception on his Leadership profile and included behaviors of a leader responding to bad and good happenings.

How you respond matters (Continued)

1.2.3 The Roxana 3x3x3 soft skils model

Based on the OCIMF ITK Behavioral Competency Assessment and Verification for Vessel Operators, by fusing communication and influencing skills to Teamworking and Leadership and managerial skills, and by merging Decision Making and Result focus skills and fusing into the merged skills set the Situation awareness skills we launched in Dec18 the Roxana 3x3x3 soft skills model, introducing

- ► 3 soft skills sets domains
  - • Team Working
  - • Leadership and Managerial
  - • Decision making and Result focus
- ► 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.

As per Roxana soft skills model for a leader following skill sets are needed:

- ► Leadership and managerial skills
- ► Decision Making and Result focus

and same is reflected in the Responsibilities and authorities for any role acting as leader.

As per Roxana soft skills model for a team member following skill sets are needed:

- ► Teamworking skills
- ► Decision Making and Result focus

and same is reflected in the Responsibilities and authorities for any role acting as team member.

1.2.4 The Human performance principles – Fair and Just for No Blame culture

Based on the:

- ► PnS Human performance 1 and 2
- ► the Todd Conklin 5 principles of human performance
- ► Energy Institute publication "Making compliance easier"
- ► OCIMF Human Factors Approach

We introduced in Dec20 in CMSM ch3.5

- ► the Roxana three human performance principles,
  - • Humans err
  - • Humans want to do a good job
  - • Human error is opportunity for system improvement
- ► The Fair and Just for No Blame culture

A Fair and Just culture soaked with these 3 human performance principles has to be a No Blame culture

2 How you respond matters

2.1 Partners in Safety (PnS) "How you respond matters"

Along with the 2021 CEO conference in Mar21 PnS introduced the "How you respond matters" module.

It consists of two videos reflecting leader behaviors and prompts participants to realize 10 tips on the proper response and 9 personal characteristics both for a great Safety Leader.

Based on these documents we prepared a questionnaire to facilitate the awareness of the proper responding and self assess our own performance in applying the principles of proper responding, as documented above

2.2 The "How you respond matters" awareness and self assessment questionnaire

The questionnaire is prepared in 8 sections, addressing:

- ► the awareness of the value of how a leader and a team member respond in the everyday life
- ► the assessment of each individual in relation of how to respond
  - • for himself (self assessment),
  - • his manager
  - • TEK (3600 assessment)

Some of the questions originate from the PnS module

How you respond matters (Continued)

3 For individual review

Attached for participants' review are the:

- ► Roxana's 3x3x3 soft skills model
- ► How you respond matters questionnaire

4 Facilitators

The facilitators in separate break out Zoom sessions will navigate their team through:

- ► 10 minutes review of Roxana's 3x3x3 soft skills model, particularly the Leadership and managerial skills and the Decision Making Result Focus skills
- ► 10 minutes view of VideoNo1
- ► 10 minutes view of VideoNo2
- ► 30 minutes brainstorm with his team over the How you respond matters questionnaire, with records in Zoom whiteboard

5 Participants

5.1 Each participant

in 30 minutes, going to the links provided to google forms, will fill in:

- ► the workshop questionnaire
- ► the workshopevaluation form

5.2 Each group

In 15 minutes will present

5.3 Method & Duration

5.3.1 The workshop is dynamic and highly interactive, consisting of a combination of group activities and input from participants' own assessment and experience.

5.3.2 Duration 90 minutes

Management Review Meeting Interim 2022-01

The Management Review Meeting Interim MR22-01 was conducted on 11Feb22 hybrid, virtual and physical. Thank you all participants for your engagements and your contribution to the meeting deliverables.

During the meeting following topics were particularly addressed:
- update and report of corrective and preventive actions follow up
- DMS refresh with latest DMS revisions, New rules and KPIs review
- the fearless ego for success concept, including the 3 pillars and engagement (CPAR, MoC, RM), Fair and Just culture for No Blame culture, Roxana 3x3x3 soft skills model and communications policy, health (mental and physical) and competence (soft and hard) for performance, fearless engagements

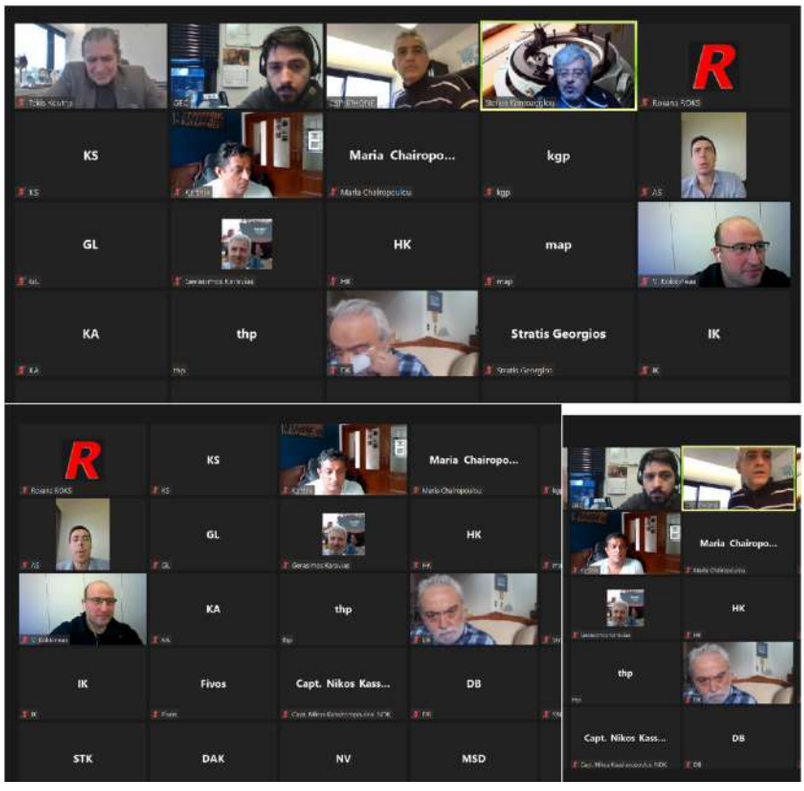
An introduction to the Workshop "How you respond matters" was given. The workshop was conducted hybrid, virtual and physical, on 11Feb22, and thank you all for the prompt and proper fill in of the questionnaire and your further feedback evaluating the workshop in terms of more to learn, most impact and for recording your personal commitments for next day to improve your response for your team's well being.

Based on the questionnaire responses following is highlighted:
- the level of understanding of the topic of the workshop is very satisfactory for all participants.
- The self assessment responses identified the that the qualities of a safety leader and his response to failure are in general met, improvement is needed for the ''learning from success" and ''Remember you are being watched so be sure to be seen responding to things right".
- The No Blame culture prevails in our system, however the shifting from the individual error to the system error still needs to be more carefully addressed.
- All participants were committed to apply the learnings of this workshop and improve their response to failures as team leaders or team members.

Records and analytics of the workshops have been made available to all participants through a separate message recap of the workshop.

Draft Minutes of the meeting, along with the updated corrective and preventive actions of Corrective Preventive Actions Plan have been made available to all participants.

All participants welcome the event and are looking forward for the next Management review meeting in May22.



Hazards for GPS and AIS operation

GPS

It has been recently reported that, the United States (US) Maritime Administration (MARAD) has issued US Maritime Advisory No. 2022-005 regarding Global Positioning System (GPS) interference in various locations around the world, particularly in the eastern and central Mediterranean Sea.

The USCG has also received incident reports from the Suez Canal, Cyprus, Malta, and Istanbul, the Persian Gulf near Dammam, Saudi Arabia, and off the coast of Brazil. GPS interference in the maritime domain is also tracked and combated through the NATO Shipping Centre (NSC). Pls note that presently in Black Sea and Ukraine GPS is often degraded for military reasons.

AIS

Automatic Identification System (AIS) are standalone systems on our vessels so no additions onboard safeguards are needed for they security, however AIS is easily spoofed from outside as the data is plain text and not encrypted in any way so it should never be completely trusted. Also a lot of vessels (for various reasons) turn OFF their AIS.

While it is an invaluable situational tool, AIS should never be solely relied upon for collision avoidance or navigational decision-making.

With this opportunity we remind you of:

1. FOM01 par 3.2.4, where Master ensures that Vessel's position is:
   - Fixed at frequent intervals, in order to ensure that planned track is being maintained.
   - Verified by two of following methods:
   • Observation of terrestrial charted objects (bearings - Visual and Radar).
   • Use of electronic navigation aids (GPS)Soundings.
   • Observation of celestial bodies at open sea passage.
   • Properly recorded in Deck Log Book.

2. FOM01 par 3.4.2, where incoming DOW should verify the position by manual position fixing, as per FOM01 3.2.4 above, with records in deck log book.

3. FOM01 par 4.1.10, where frequency of position verification is maximum 30 minutes for ocean navigation and max 15 minutes for coastal (and HRAs) navigation and to the Master's discretion and additional guidelines on celestial navigation and position fixing.

4. FOM01 par 4.1.11 on supplementary guidelines relevant to radar bearings and ranges for position fixing.

5. Manual position fixing and celestial navigation are included in:
   - ECDIS type specific reflective learning courses in Vladivostok, training videos are provided
   - Pre-joining familiarization of deck officers
   - Training on board for promotion, form CP06-41 for junior deck officers, training videos and cds are provided in ship's library

Compliance with manual position fixing is verified by:
   - Master during his Navigational audits, recorded in HSQE minutes, form CP06-10
   - Superintendents during the Navigational Audits and regular shipboard attendances.
   Findings are reported through the "Navigational Audit Checklist" form CP11-10 and TIARE, form CP09-01.

6. FOM14 par4.5 refers to AIS and GPS cyber security and possible cyber attacks, spoofing and jamming
   - Jamming generally done by State authorities. It makes the GPS erratic either giving a completely wrong or erratic position or having no position at all
   - Spoofing - This can be done cyber attackers, physically close to the ship (10s of Miles), by masquerading as a GPS satellite and/or AIS and sending a slightly altered time signal which blankets the real GPS signal.

The issue to be discussed with your crew at HSQE Committee meeting to increase the awareness.

M/V Revenger class notation remote

Our M/V Revenger, in line with our policy to enhance the remote surveys option for our fleet, is assigned by RINA the additional class notation "REMOTE".

As already highlighted during conceiving and completing this project the major advantage is that the remote surveys notation offers the ship managers the flexibility to defer the inspections when conditions in port are non-viable and not safe and conduct them at a proper timing at sea, with the same effectiveness and less distraction for our crew. Remote notation is a steady step towards the zero incident Industry we are all aiming to.

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This event was in the marine press, below is extract from Hellenic Shipping News 28/01/2022

Greek Bulker Owner ROKS is assigned with the additional class notation "REMOTE" by RINA

ROKS has been successfully assigned with the additional voluntary class notation "REMOTE" by RINA for the m/v Revenger. This class notation is assigned to ships deemed capable to be surveyed remotely for the largest scope of class surveys as well as periodical ones. In particular, the m/v Revenger is equipped with devices for livestreaming – a portable device with wide angle functionality and high-quality optical lenses are available onboard. The vessel is also fitted out with a Connectivity Kit enabling the ship to have internet access in enclosed spaces. After the completion of the relevant training a Certificate of Competency is issued for the crew who take an active part in the remote surveys, manage the connectivity kit and livestreaming (even offline). The class and statutory certificates are issued to m/v Revenger by RINA in electronic form.

Panagiotis Koutris, Managing Director of ROKS Maritime Inc. commented "The remote surveys notation offers the ship managers the flexibility to defer the inspections when conditions in port are non-viable and not safe and conduct them at a proper timing at sea, with the same effectiveness and less distraction for our crew. Remote notation is a steady step towards the zero incident Industry we are all aiming to."

Spyros Zolotas, Marine Southern Europe and Africa, Senior Director of RINA added "New remote technologies can provide shipping with a safer outcome, especially following the outbreak of COVID19. Technology and digitalization are no longer the future but are making the difference right now."

ROKS MARITIME Inc. is managing a fleet of three handy size bulkers, certified by RINA for ISM, ISO 2001, ISO 14001 and ISO 27001.

Source: RINA

Other relevant press releases in following links

- https://www.naftikachronika.gr/2022/01/31/roks-maritime-kai-rina-axiopoioun-tis-nees-technologies-proothontas-tis-apomakrysmenes-epitheoriseis-ploion/
- https://www.nafsgreen.gr/top-stories/9497-roks-is-assigned-with-the-additional-class-notation-%E2%80%9Cremote%E2%80%9D-by-rina.html
- https://www.hellenicshippingnews.com/greek-bulker-owner-roks-is-assigned-with-the-additional-class-notation-remote-by-rina/
- http://www.elnavi.eu/2022/01/roks-is-assigned-with-the-additional-class-notation-%e2%80%9cremote%e2%80%9d-by-rina/
- https://allaboutshipping.co.uk/2022/01/27/roks-is-assigned-with-the-additional-class-notation-remote-by-rina/

Remote surveys and e-certificates project notification 220209

1. Further to our circular outgoing Message 989930 and memo 698819 of 29Jun21 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 since 30Oct20.
Under the scope of this project we have also added the implementation of remote surveys, which is provided by Major Classification societies and OCIMF, particularly during the covid19 outbreak.

2. Remote surveys are
- removing for the surveyors the hazards of transit, access to ship, walk on board
- removing for the crew the hazards of fatigue, distraction while operating, since the survey may be conducted at a mutually accepted timing and not in port
- bringing flexibility to the survey implementation, as they minimize the survey logistical costs, reduce operational down time and eliminate waiting for Surveyor attendance, allows for repeatability and 3rd opinion.

3. Project team leader is as of 29Jul21 Kalliopi Papageorgiou (KGP), replacing Liana Kapsali (LPK) and project team members are Nikolaos Giampanis (NG), Vasileios Kokkineas (VK), as of 01Apr20 Stelios Kontozoglou (SAK) and Takis Koutris (TEK) were added in view of remote surveys demand due to covid19.
Last meeting was conducted on 09Feb22, in the presence of Nikolaos Giampanis (NG), Stelios Kontozoglou (SAK), Takis Koutris (TEK), Vasileios Kokkineas (VK), Theodoros Papatheodorou (THP), Katerina Sfendylaki (KS) and Kalliopi Papageorgiou (KGP).

Out of this meeting following is reported for remote surveys:

3.1 The class notation REMOTE was assigned to M/V Revenger.
3.2 Hardware/software for remote surveys will be continually researched and evaluated, in view of the fast changing technological options.
3.3 Every month a remote equipment will be sent to a vessel as per plan
3.4 Next month vessel will be M/T Mavrouda
3.5 A pilot project was decided in co-operation with our business partner Navarino to test the Waavia 7 software, which will allow a decent video, audio and chat with ships through Fleet Express. ATS was selected as pilot ship for evaluated of the software. Software was tested in operation, however there is a conflict with Ulysses TA software. We are in liaison with Ulysses programmers to resolve the problem.

4. 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 please:

4.1 SAK:
- Continuous Market research and evaluation on equipment/software for remote surveys (Kiber, Epson, Navarino)
- Ensure pilot of installation of the Waavia 7 software on ATS, issue instructions and familiarise personnel on board and ashore and evaluate performance of Waavia software.
- Prepare equipment for remote surveys for RoKcs
- Prepare equipment for remote surveys for vessel M/T Mavrouda
- Issue instructions and arrange familiarization engagements (remote and physical) for crew and office personnel

Remote surveys and e-certificates project notification 220209 (Continued)

4.2 CSP:
- Delivery on board M/T Mavrouda of equipment for remote surveys

4.3 TEK:
- Promote in the Industry associations the concept of remote survey notation
- Follow up with Martecma and class societies the outcome of the webinar with class and flag reps on remote annual inspections and audits
- Prepare a relevant presentation to Intercargo

4.4 NG/Gr1:
- Indicative and as a minimum scope of offline and online requirements for TIARE to be prepared
- Familiarisation courses for the use of remote equipment for remote TIARE/BIARE
- Consolidated annual class and statutory inspection checklist, sorted by location
- Evaluate performance of the Waavia 7 software in liaison with SAK
- Prior dispatch of remote equipment, refresh training to Supt's for the use of equipment for remote TIARE/BIARE

5. Next project team meeting is planned by 26May22.

6. KGP to update the projects follow-up matrix, the Vessels project actions matrix, the NewsWaves\Hot Stuff and hyperlink MR agenda and MoC plan.

Intertanko OCIMF Steering Group 16th meeting 19Jan22

Our Managing Director, Mr. Koutris, attended the Sixteenth meeting of Intertanko OCIMF Steering Group, on 19th January 2022, which was conducted virtually via MS Teams.

The topics that were discussed during this meeting are listed below:

1. Introduction and Anti-Trust
2. Adoption of Agenda
3. Overview and update of Incident Investigation Methodology work
4. Update on Tanker Accident Database
5. Overview and update of Behavioural Competence Assessment and Verification implementation
6. Administrative burden update and feedback
7. Environment / GHG reductions update and feedback
8. Any other business
a. Application and usability of ECDIS
9. Venue and Date for Next Meeting

Records of the meeting and relevant documents in path:
K:\Pool\MR\Intertanko\ITK OCIMF Steering Group\ITK OCIMF SG16 2022_01_19

Shell Maritime Partners in Safety CEO conference 14-15 Mar22

Our Managing Director, Mr. Koutris, attended the Maritime Partners in Safety CEO Conference, on 14-15 March 2022, which was conducted virtually via MS Teams.

The agenda of the meeting is presented below:

For the 1st day, on 14Mar22:

► **Session 1**: Leading Through Actions
• Welcome and opening with Karrie Trauth, Senior Vice President, Shell Shipping & Maritime
• News from 2021 and breakout discussions

► **Session 2:** Context Drives Behaviour
• Human Performance implications for safety
• Reflective Learning exercise and sharing our learnings

For the 2nd day, on 15Mar22:

► **Session 3:** Leaders Care for Wellbeing
• Solving wellbeing dilemmas of our peers
• Reflecting on the impact for our own companies

► **Session 4:** Building Our Safety Capabilities
• Hearing from our crews
• Communicating the 'why' to energise our messaging

► **Closing**
• Close by Karrie Trauth, commissioning us for another year of our journey towards a zero-incident industry

Intercargo Technical and Executive committee meetings 31Mar-01Apr22

Our Managing Director, Mr. Koutris, attended the 45th Technical Committee Meeting of Intercargo, on 31st March 2022, and the Executive Committee Meeting on 01st April 2022, which were conducted virtually via MS Teams.

The topics that were discussed during this meetings are listed below:

► TC Meeting:

- Greenhouse Gas Reduction
- The Sulphur Cap/Fuel Quality
- Ship Recycling
- Ballast Water Management
- Data Collection
- Cargoes
- SafetyTech Accelerator

► ExCom Meeting:

- Introduction - Minutes of previous meeting
- Report / endorsement of Technical Committee meeting
- Ongoing crises' impacts
- GHG emissions
- ESG issues
- Key operational issues
- Membership, Administration & Secretariat

Best Practices Jan22-Mar22

Best Practices are considered the high performance ways of achieving objectives, which solve problems, create opportunities, and lead to "HSQE management excellence".

Best practices are considered for adoption and transfer ashore and across the fleet through the consistent application of improved processes and procedures.

Congratulations to all for the following Best Practices, which have been identified and recorded in HSQE CMM for the period Jan22-Mar22:

- M/T Malbec, Capt. A. Kozlov and Ch.Off. A. Volobuyev, date Feb22
  Save water on board, using water saving nozzle with flexible hose

- M/V Revenger, Capt. A. Lysyy and Ch.Off. V. Matveev, date Jan22
  Cargo cranes - Safety chain on vertical ladders.

- M/V Adventurer, Capt. B. Vertinskii and Ch.Off. P. Sharyy, date Mar22
  Warning "DO NOT USE IN PORT AND AT ANCHOR" for Galley Grinder machine posted near the Grinder control unit.

Best Ship performance 2021

It was in the Management Review of 2012-02 that the issue of monitoring the individual performance of Ships and Officers serving in Roxana Fleet was raised. At that time, KPIs were considered to be LTIF/TRCF, 3rd party Inspection performance and spares ordered vs budget.

In the Management Review of 2022-01 a new excel monitoring the Ship's performance was introduced. The new format monitors further key aspects of each Ship's performance including LTIF/TRCF, PSC detentions and DPI, Vetting acceptance and DPI, Master's review proposals, Near misses and RMs, Best practices, Condition of Class.

Each of the above KPIs bears a weight factor in the equation calculating the point each ship collects over the year.

The 2021 statistics according to the new format have indicated following 3 top scoring ships:

		EVALUATION CRITERIA															EVALUATION RESULTS
SHIP NAME	VESSEL'S AGE	LTIF	TRCF	Fatalities per year	No of Pollution incidents	No of TIARE obs - Unsafe Acts/ Unsafe Conditions	No of vetting obs/inspection	No of Vetting rejections	No of PSC inspection obs per inspection	PSC detentions	Downtime due to critical equipment failure h	No of Best practices identified / implemented	No of Near Misses per year	No of Risk assessments	No of Master's review proposals and change	Crew complains per year	COC	REMARKS / COMMENTS
TARGET VALUE	10	0	1	0	0	10	3	0	0,9	0	0	2	36	36	12	0	0	
WEIGHT FACTOR	3	-10,0	-7,0	-100,0	-10,0	-5,0	-6,0	-10,0	-5,0	-10,0	-0,9	0,7	0,7	0,7	0,7	0,7	-10,0	
Altesse	12	0	0	0	0	4,5	2,25	0	0	0	0	0	23	18	10	0	0	
Miracle	14	0	0	0	0	7,8	2	0	0	0	0	1	26	27	4	0	0	
Aligote	12	0	0	0	0	6	2,33	0	1	0	0	0	25	22	5	0	0	
																		EVALUATION RESULTS
Weighted Targets	30	0	-7	0	0	-50	-18	0	-4,5	0	0	1,4	25,2	25,2	8,4	0	0	-19,3
Ship																		Weighted Result
Altesse	6	0	7	0	0	27,5	4,5	0	4,5	0	0	-1,4	-9,1	-12,6	-1,4	0	0	25
Miracle	12	0	7	0	0	11	6	0	4,5	0	0	-0,7	-7	-6,3	-5,6	0	0	20,9
Aligote	6	0	7	0	0	20	4,02	0	-0,5	0	0	-1,4	-7,7	-9,8	-4,9	0	0	12,72

Congratulations for a job well done to the Masters, Chief Engineers and crew on board of:

Altesse: 204Aug20-20Jan21 Khairullin Oleg, 20Jan21-05Jul21 Sukhodoev Oleg, 30Jun21-25Jan22 Khairullin Oleg 28Sep20-09Jun21 Polkovnikov Alexey, 06Jun21-27Nov21 Dolgopolov Igor, 25Nov21-09Apr22 Polkovnikov Alexey

Miracle: 08Aug20-28Apr21 Kozlov Alexander, 26Apr21-17Oct21 Simonov Sergey, 17Oct21-05Mar22 Sheludko Viacheslav 17Dec19-10Sep20 Negreba Leonid, 10Sep20-28Dec20 Sergeichev Aleksei, 26Dec20-27Apr21 Mikhailov Iurii

Aligote: 28Jul20-08Mar21Chernobrovkin Andrey, 13Feb21-12Jul21 Cherepanov Viacheslav, 12Jul21-14Jan22 Dimov German 23Jul20-13Feb21 Farkov Sergey, 13Feb21-02Jul21 Potyanikhin Andrey, 01Jul21-07Jan22 Kril Oleg

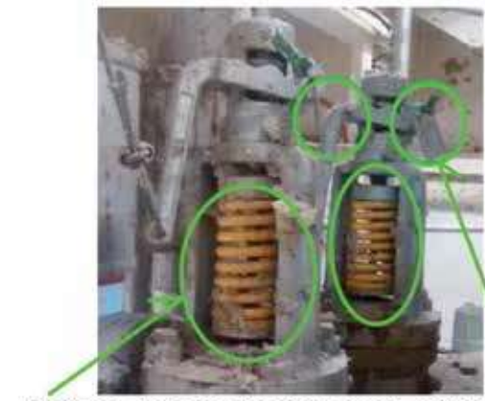
Boiler over-pressure causes three fatalities
Edited from the BMA (Bahamas) report published 18 March 2020

A drill ship holding position offshore was due to carry out the annual servicing of its two auxiliary boilers. The boilers were used only for well test operations and had not been operated since the last annual service, except for maintenance operations.

The duty engineers brought the boilers up to temperature and pressure specifications in preparation for the annual checks. As this was underway, the pressure safety valves opened. They appeared to open at 1.9 bar for boiler 1 and 5.9 bar for boiler 2; well below the boilers' working pressure of 7 bar. Over the course of the next four hours, the boilers were stopped and restarted a further three times. Each time, pressure safety valves operated at what appeared to be too low a pressure.

Two shore based service technicians had now joined the vessel by helicopter but the boilers were not ready for servicing due to the perceived issues with the pressure safety valves. The ship's engineers, together with the service technicians, again started the boilers to check the operation of the pressure safety valves. They still appeared to be opening below the boilers' working pressure. It was decided to shut down the boilers and allow them to cool so the technicians could then overhaul the pressure safety valves. Once cool, the pressure safety valves of boiler 1 were adjusted in situ by the service engineers so they would open at a higher pressure. This explains why the 'non-tamper' seals were found missing from the safety valves of boiler 1 after the accident.

Springs of boiler 1 safety valves as found after accident.



Springs and non-tamper seals of boiler 2

The next day, the service technicians resumed the work, together with one of the ship's engineering personnel. The boilers were started and almost immediately triggered alarms on the machinery monitoring panel. Over the course of the next 36 minutes at least 20 alarms were acknowledged as the team struggled to find the problem. Then, boiler 1 catastrophically failed from overpressure, filling the boiler compartment with steam. The two service technicians and ship's second assistant engineer who were in the boiler room suffered lethal injuries. The weathertight door was blown open and the pressure vented to atmosphere, injuring another crewmember who was working nearby.

The investigation found, among other things, that the pressure sensors of boiler 1 were not operating as required and were giving false pressure readings. Yet the accuracy of the pressure sensors was never questioned as everyone believed they knew the problem; that the safety valves were opening below their set pressure. It is possible that this led to confirmation bias that then set the stage for the unsafe act of adjusting the safety valves to open under higher pressure.

Further, the service technicians' lack of experience may have contributed to both the confirmation bias and the subsequent unsafe act. Adequate supervision by a qualified professional could have prevented this deviation from established safe practices.

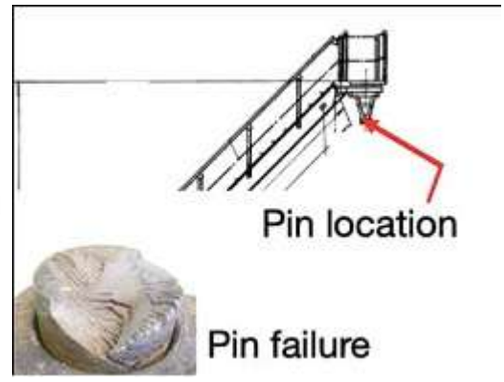
Lessons learned

- In systems that are dependent on several inputs, careful analysis is needed to determine where the real source of the problem lies. In this case the problem was 'upstream' of the safety valves, at the pressure sensors.
- Boilers are inherently very dangerous due to high operating temperatures and pressures. Strict and competent supervision of operation and maintenance should be the norm.
- Safety valve operating parameters should only be set by expert guidance and under test bench conditions, never 'on the fly'. Once adjusted, the valves are then fitted with a non-tamper seal identifying the set pressure, facility that performed the work and the date of adjustment. These seals should not be removed.
- Be aware of confirmation bias, one of the leading factors in many accidents related to human error.

Source: MARS

Accommodation ladder turntable pin failure
As edited from USCG (USA) Safety Alert 05-21

A recent incident brought to light a potentially dangerous situation involving failure of the turntable pin on accommodation ladders.
The vessel's crew was stowing the accommodation ladder when the turntable pin failed. The victim, who was on the accommodation
ladder at the time, fell approximately nine metres and sustained serious injuries.
Currently, there are no established timelines or requirements to replace turntable pins. Without periodic examination (and replacement if needed), corrosion can ultimately lead to structural failure.
After the incident specific inspections were undertaken; local authorities noted that many vessels had accommodation ladder turntable pins that had been in service for more than 20 years without replacement. Notwithstanding the guidelines on the maintenance of accommodation ladders contained within 74 SOLAS (14) II-1/3-9, MSC.1/Circ. 1331, and 74 SOLAS (14) III/20.7.2, none of these references include maintenance guidelines for turntable pins.



Lessons learned
- While the turntable pin may seem like a minor component, failure can cause significant harm to anyone using the accommodation ladder at the time.
- Periodically inspect the condition of the turntable pins and replace when necessary.
- Revise accommodation ladder maintenance plans to include turntable pins.

Source: MARS

Collision with a fishing vessel in a TSS
As edited from official FEBIMA (Belgium) report 2020/005040

A general cargo vessel was sailing in a Traffic Separation Scheme (TSS) at night in calm seas and good visibility. The vessel was under autopilot, on a course of 249 degrees at approximately 10.5 knots. The Officer of the Watch (OOW) noticed four fishing vessels on the radar that were crossing the TSS and appeared to be sailing as a group. The fishing vessels were approximately 10.5 nm away and approaching on the port side, showing Closest Point of Approach (CPAs) of between 0.1 and 0.6 nm. The Time to Closest Point of Approach (TCPA) was approximately 50 minutes.
Some time later, the OOW set the radar to a 6 nm range. The radar indicated three CPA/TCPA limit alarms from the group of four fishing vessels. One of the fishing vessels altered course approximately 30° to port in order to cross ahead of the cargo vessel with a CPA of 0.4 nm.
Two of the other fishing boats, A and B, kept a course of approximately 006 degrees. At one point, fishing boat B altered course slowly towards 011 degrees to pass astern of the cargo vessel, but fishing vessel A did not follow this move. Its CPA to the cargo vessel was approximately .05 nm. In the following minutes, the OOW of the cargo vessel noticed that the CPA of fishing boat A had decreased to zero.
By this time another officer had arrived on the bridge of the cargo vessel for the change of watch. Before the handover could be accomplished the OOW on duty realised that fishing vessel A was not taking avoiding action. The OOW sounded the horn to warn fishing vessel A and then put the rudder hard to starboard. About 40 seconds after sounding the horn, the two vessels collided. Fishing vessel A ran into the port side of the cargo vessel amidships and then slid aft. Both vessels sustained structural damage but there were no injuries.

Collision with a fishing vessel in a TSS
As edited from official FEBIMA (Belgium) report 2020/005040 (Continued)

It was discovered during the investigation that the lone watchkeeper on board fishing vessel A did not realise the cargo vessel was there until it was too late. The investigation also found that the 'apparent intentions' of the four fishing vessels contributed to the accident. Some of the fishing vessels did take action to avoid the cargo vessel but in the end, one did not. The OOW on the cargo vessel assumed all the fishing vessel crews had observed his ship, but he was wrong.

Lessons learned

- When in doubt and always when a very small CPA is detected, establish early communications with the other vessel and ensure everyone knows what actions are to be taken.
- Sound navigation practices and a good lookout would have avoided this accident as the Master of the fishing boat would have realised there was a stand-on cargo boat on his course with a zero CPA.

Source: MARS

In-transit fumigation fatality
As edited from official MAISSPB (Hong Kong/SAR) report published 2019

A handy-sized bulk carrier was loaded with wheat, and the cargo was fumigated after completion of loading. When the fumigation procedure was undertaken, the hatch covers, ventilators and access hatches to all five cargo holds were sealed. The vessel then departed for a trans-oceanic voyage. The crew had been briefed on the dangers of fumigation gas and the Master told the crew to stay alert for the smell of garlic or decaying fish as this scent had been added to the gas to allow easy detection.

During the first three days of the voyage, phosphine gas readings were taken at regular intervals at the upper deck accommodation and the forecastle deck. All readings were zero ppm. On the fourth day, the gas test results showed that the accommodation on upper deck contained 0.1 ppm of phosphine gas. (According to best practices, an eight-hour average respiratory exposure to phosphine gas should not exceed 0.3 ppm and a short-term exposure should not exceed 1ppm.)

On the same day, a crew member remarked that he had noticed a bad odour inside his cabin. A test in the cabin showed no phosphine gas but the crew member was relocated to another cabin.

The next day, a phosphine gas reading of 2 ppm was measured at the upper deck alleyway. The Master called muster stations and instructed all crew to evacuate their cabins at once. The engine cadet did not appear at muster, so two crew went to his cabin where he was found in a state of partial paralysis. The victim was taken outside for care. A phosphine gas reading of 9 ppm was measured in his cabin, which was next to the cabin of the crew member who had been relocated the previous day.

Over the next hour, the victim's vital signs deteriorated. A request for radio medical advice was sent and cardio-pulmonary resuscitation was carried out, but the crew were unable to revive the victim. His body was brought ashore at a port of refuge two days later.

The official investigation found, among other things, that a permanent access light for the aft access ladder of No. 5 cargo hold had been installed during construction.

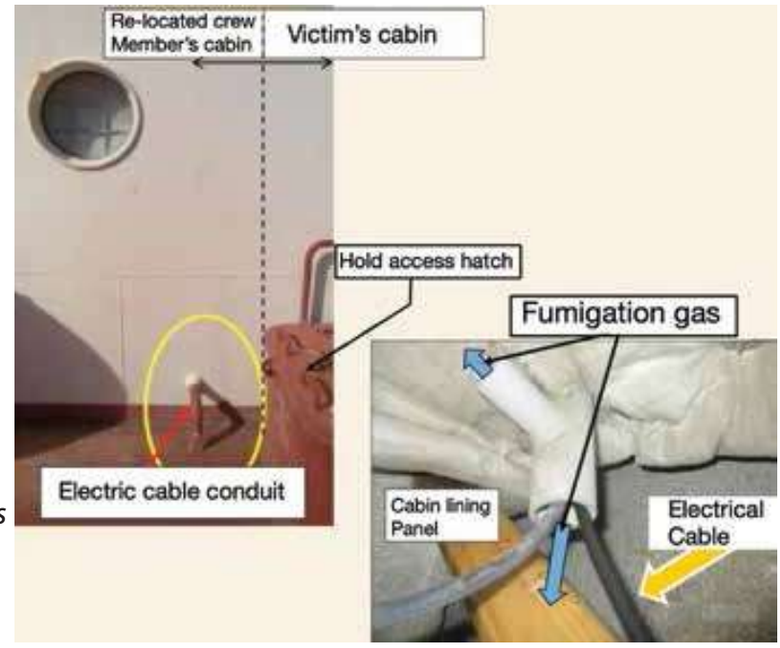
In-transit fumigation fatality
As edited from official MAISSPB (Hong Kong/SAR) report published 2019 (Continued)

A conduit was used to run the electric cable between the accommodation and No. 5 cargo hold. The conduit ends were not sealed, contrary to best practices and classification rules. This defect allowed the phosphine gas to infiltrate the accommodation area and enter the crew cabins.

Lessons learned

As in the previous report, MARS 202209, the suitability of a vessel for fumigation is a critical factor and could mean the difference between life or death. In this case a 'man-made' defect rendered the vessel unsuitable for fumigation.

• Deadly fumigation gases can take several days to infiltrate accommodation areas, even when a clear passage exists, as in this case. Continuous or very frequent testing is the best defence against this danger.



Source: MARS

Fumigation fatality
As edited from official BMA (Bahamas) report published 19 November 2020

A small general cargo vessel with seven crew berthed to load a cargo of corn in bulk. Loading commenced after preparation and cleaning
of the hold. The gas tight integrity of the hold was not tested before loading, even though it was intended to undertake in-transit fumigation after loading.

Fumigation specialists arrived at the vessel once loading was complete. They verbally confirmed with the Master that the hold was suitable for fumigation. Several bags of aluminium phosphide
fumigant were then placed in the hold. The plan was to provide a dose of 1g of active ingredient per cubic metre of cargo. The hatches were closed, and the Master was given a briefing document pack and gas detection equipment for testing for the presence of the fumigant inside the accommodation and engine room. The Chief Officer was given training on the use of the gas detection equipment. According to these instructions, tests were to be conducted every eight hours.

The vessel departed the next morning with the favourable tide. At 0800, the Chief Officer carried out an initial check for the presence of the fumigant. He tested two locations in the accommodation and one in the engine room. These checks were repeated at 2000 that evening and at 0800 the following day. During this period, the weather deteriorated and the Master adjusted the passage plan to reduce the motion of
the vessel. At approximately 1030 on the second day out of port, a significant wave caused flooding in the galley and store through the ventilation trunking. The accommodation ventilation flaps were shut and the ventilation system stopped.

After lunch, the crew who were not working retired to their cabins. By 1245, several of the crew were experiencing headaches, fatigue and severe nausea. This was attributed by various members of the crew to
either seasickness, a reaction to the food eaten at lunch, or the presence of exhaust gas in the accommodation. None were aware they were actually suffering from fumigation poisoning.

With the exception of the Chief Engineer, who went to the engine room, the affected crew either remained in their cabins, or went to the bridge or on to the boat deck to get fresh air. At about 1800 that day, when the Master became aware that at least three of the crew were unwell, the possibility of fumigation poisoning was raised.

The atmosphere in the accommodation was re-tested and the presence of deadly fumigation gas was confirmed. Local authorities were immediately informed of the situation and assistance was requested. The crew were then moved to the ship's office and Master's cabin, where windows could be opened to increase the flow of fresh air. Some time before 1900, one crew member returned to his cabin unnoticed.

Fumigation fatality
As edited from official BMA (Bahamas) report published 19 November 2020 (Continued)

About one hour later, a rescue helicopter arrived at the vessel. A winchman was lowered on to the deck, but poor weather conditions and a technical issue with the helicopter meant the helicopter had to return to base without the winchman or affected crew. The vessel re-routed to the closest port.

By now, three members of the crew were in a serious condition and the crew member who had returned to his cabin was found there unresponsive.

An hour later, a second helicopter arrived with a medical team. They were able to stabilise the three crew, who were evacuated by boat when the vessel approached the port pilot station. They eventually recovered in hospital. The unresponsive crew member was declared deceased.

The official investigation found, among other things, that:

• No consideration was given to the potential knock-on effects of closing the ventilation flaps of the accommodation, thus stopping the ventilation, or the additional risk posed by the fumigated cargo.

• By the time the vessel accommodation's forced ventilation was stopped, there was a positive pressure of fumigation gas in the hold. Stopping the ventilation and closing the ventilation flaps resulted in positive pressure being lost in the accommodation, allowing the fumigant to enter the accommodation via the sanitary ventilation system and, to a lesser extent, other entry points.

• At least two members of the seven person crew (28%) were not present for the Chief Officer's fumigation briefing. It would appear that the briefing did not highlight the risks of the operation or symptoms of poisoning enough to alert the crew when taken ill, even for those that were present.

• The periodic monitoring of the accommodation and engine room atmosphere was not conducted at the required eight hour frequency and did not detect the fumigant in time to avert lethal levels of exposure. Additionally, the fumigant's 'carbide additive' did not provide sufficient olfactory warning (smell) to indicate the presence of the fumigant.

• The suitability of a vessel for fumigation is a critical factor and could mean the difference between life or death. This problem has been seen in the past, as in MARS report 200880, and in particular in the following MARS report 202210. Companies must have adequate procedures in place to assess the suitability of a vessel to carry fumigated cargoes.

• The BMA report on which this MARS report is based lists seven other instances where fumigation gases have caused fatalities or very serious illness to crew (2008-2020). The common factors from these occurrences were:

– Crew unaware of effects of exposure to fumigant gas.

– Symptoms were confused with food poisoning or seasickness.

– Ineffective or inadequate periodic testing regime.

– Lack of effective physical barriers between fumigated cargo space and accommodation.

• When in-transit fumigation of cargo is planned, extreme care should be taken to assess the integrity of ventilation trunks, shared bulkheads, duct keels and electrical conduits that might allow passage of gas into accommodation or working areas.

• Masters and crew of vessels used for in-transit fumigation must be aware of the potential impacts of changing ventilation arrangements such as adjusting closing devices or flap settings, air conditioning and closed loop ventilation; this could create a vacuum which draws in the fumigant gas.

• Periodic atmosphere monitoring is not as effective as continuous monitoring.

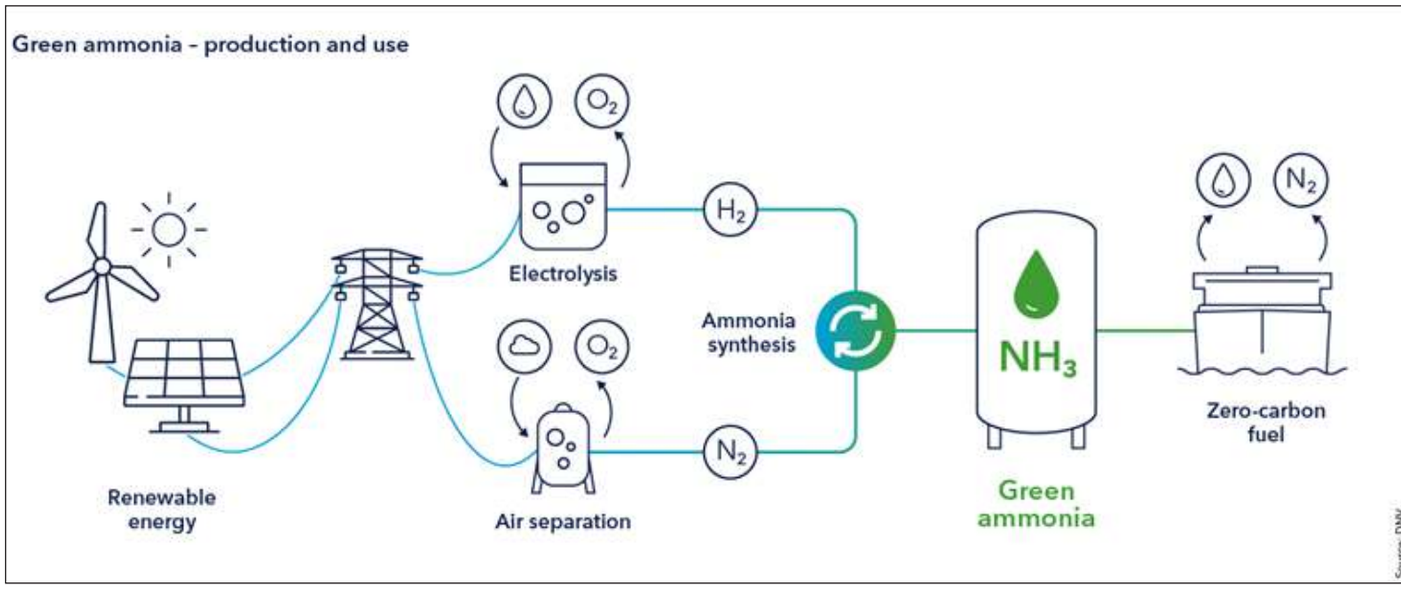
• All crew must be fully aware of the risks and mitigation measures required to carry fumigated cargo safely. All should be fully briefed on the particulars of the smell of the fumigant, effects of poisoning and actions to take if exposed.

Source: MARS

Harnessing ammonia as ship fuel

Ammonia is one of the most promising future fuels in the maritime world, but introducing it to the fuel mix is far from straightforward. What are some of the biggest challenges that need to be overcome? And what are DNV and other companies doing to tackle them?
It smells pungent and if a mere 0.5 per cent of the air you breath consists of it, it will kill you. And yet ammonia is being heralded as one of the best zero-carbon fuel options for deep-sea shipping in particular. In this article we will highlight some of the central questions that need to be answered before ammonia-fuelled ships can hit the water, including the supply, sustainability, engine technology and the necessary safety considerations.

1. Supply: Shipping will have to compete with other industries
Today, around 80 per cent of the global ammonia supply is used as fertilizer. Where will the ammonia for shipping come from? This is an issue that remains to be resolved, and production would have to ramp up significantly to meet the future demands of both shipping and global agriculture.
"In the context of decarbonization it's important to understand that when we talk about ammonia's great potential for shipping, we mean green ammonia. The fuel's sustainability credentials vary depending on how it is sourced," explains Hendrik Brinks, Principal Researcher for Zero Carbon Fuels at DNV.



2. Fuel suppliers working on framework for green ammonia production
The fuel can be categorized as "brown" (produced from fossil sources), "blue" (produced from fossil sources with carbon capture) or "green" (produced from renewably sourced hydrogen in a process called electrolysis). "While the production of blue ammonia results in 85 per cent less CO2 emissions than brown variants, only green ammonia is a zero-carbon fuel," he adds.
The crux is: green ammonia is currently not produced anywhere. This is expected to change over the coming decade. "Several fuel suppliers are already doing a lot of work on the necessary framework for producing green ammonia, including certification, technology and costs," says Brinks.

3. Engine technology: First ammonia-fuelled engine by 2024
While the supply of green ammonia will take time, the development of engine technology is progressing fast. In the AEngine joint development project (JDP), MAN Energy Solutions, Eltronic FuelTech, the Technical University of Denmark and DNV are working together on developing the first dual-fuel ammonia-powered combustion engines. The AEngine project is funded by the Innovation Fund Denmark. With combustion testing scheduled for this spring, MAN's two-stroke model is expected to go to market in 2024.
In the AEngine JDP, MAN Energy Solutions, Eltronic FuelTech, the Technical University of Denmark and DNV are working on the development of the MAN ME-LGIa ammonia-burning engine.

Harnessing ammonia as ship fuel (Continued)

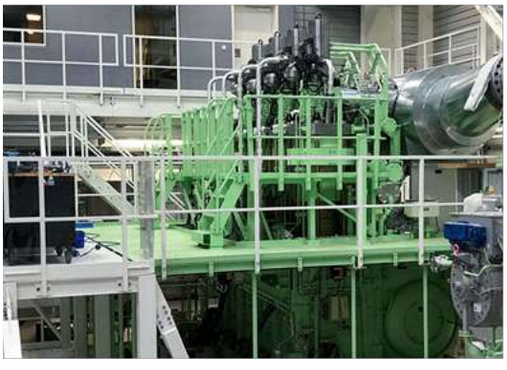
"As an engine designer we are agnostic when it comes to the different fuel types," says Peter H. Kirkeby, Principal Specialist, Dual-Fuel Engines at MAN Energy Solutions. "Ammonia has generated a lot of interest, especially from the deep-sea ship segments, and it has a lot of potential – but developing an engine that is powered by ammonia has been a challenge. One of the biggest hurdles is how to burn ammonia efficiently to extract the maximum amount of power while making sure the engine is still a compact design."

4. Combustion: Ammonia burns more slowly than other fuels
Unlike diesel oil, ammonia has a very slow flame propagation, which means it burns much more slowly. Its autoignition temperature is also a lot higher, at around 630°C – diesel oil burns at 210°C. This means that sustaining combustion once it gets started is also more difficult with ammonia than with other fuels.
"And, of course, you also need to ensure that the engine allows for the usual performance peaks that come with acceleration, etc. We are planning for a final fuel mix that would contain around 95 per cent ammonia and 5 per cent of a pilot fuel such as marine gas oil. In the future this could even be biofuel," says Kirkeby.

5. Harmful emissions could be mitigated by combustion process
Mitigating harmful emissions is another significant challenge, even with green ammonia. While carbon-free, ammonia contains a lot of nitrogen, and burning it is likely to result in both nitrogen oxide (NOX) and nitrous oxide emissions. Kirkeby explains that NOX emissions weren't so much of an issue for the engine manufacturer. "They are well-regulated and the abatement technology for NOX – selective catalytic reaction – is already used on many ships and should also be suitable for ammonia. Nitrous oxide emissions are the greater challenge. N2O, or laughing gas, is a very aggressive greenhouse gas that is 283 times stronger than CO2. Our approach is to use the combustion process itself to mitigate these emissions."

We have to make it a very simple system that can also handle ammonia – meaning that it is modular enough to allow for easy troubleshooting and for crews to have straightforward maintenance procedures even though the fuel is a toxic substance.
Peter H. Kirkeby
Principal Specialist, Dual-Fuel Engines, MAN Energy Solutions

This is how it could be done: burning ammonia generates nitrous oxide emissions inside a certain pressure and temperature window during the combustion process. "Through combustion tuning, we can either stay clear of that window or we can go into the temperature and pressure range where it's decomposed again. In the diesel cycle, which is the one we use, you have very good control over this," says Kirkeby.



The final challenge has been to adapt the well-established two-stroke engine system to ammonia without changing the fundamentally good things about it. "We have to make it a very simple system that can also handle ammonia – meaning that it is modular enough to allow for easy troubleshooting and for crews to have straightforward maintenance procedures even though the fuel is a toxic substance."
The MAN Energy Solutions test bed plays a crucial role in the development of ammonia combustion technology, which, while carbon-free, must ensure safety and avoid corrosion.

6. Ammonia tankers ideal first users
Looking ahead, the first engines will likely be installed on ammonia tankers. Currently there are about 200 gas tankers that can take ammonia as cargo and typically 40 of them are deployed with ammonia cargo at any point in time. These kinds of vessels could be ideal candidates as they already have the fuel as cargo and crews with experience in handling ammonia. Other segments such as bulk carriers and containerships could follow suit. DNV expects the first ammonia-fuelled vessels to hit the water in the second half of this decade, but large-scale uptake of this technology is not expected until the early 2030s.
The safety of ammonia systems and operational procedures is at the top of the agenda in DNV's work on this fuel. In the AEngine joint development project, DNV is handling the safety aspects and will be performing risk assessments with regard to hazard identification (HAZID), hazard and operability (HAZOP) and failure mode and effect analysis (FMEA).

Harnessing ammonia as ship fuel (Continued)

7. Safety: Mitigating ammonia toxicity
DNV class rules for ammonia as ship fuel were published in July 2021, paving the way for technology development. They include provisions for storing, handling and bunkering ammonia on board. Some of the aspects to consider here include the use of toxicity zones and venting masts in specific locations.
The engine technology itself would be fitted with double wall piping, so that the pipe containing ammonia is surrounded by a ventilated space, making it easy to detect leaks. "This is a common standard for all alternative fuels," explains Christos Chryssakis, Business Development Manager and Alternative Fuels Expert at DNV. Additional solutions such as double block and bleed valves ensure that systems can be separated for maintenance.
"Our class rules for ammonia are based on experience with ammonia as a refrigerant and as cargo. We are constantly updating these rules, as ongoing research offers further insights into the necessary margins to ensure that systems are not only safe but also practical in their handling," says Chryssakis. "Carrying out risk assessments on the first designs for ammonia-fuelled vessels will be an important next step."

8. DNV carries out studies on ammonia bunkering
Looking beyond operations on board ammonia-fuelled vessels, DNV recently completed studies on ammonia bunkering operations in the Ports of Amsterdam and Oslo, examining the potential ramifications of a large ammonia leak in ports. "We looked at worst-case scenarios, including the implications of leaks in the port-side supply infrastructure and on a bunker vessel. The Port of Oslo lies in a residential area – so the stakes are particularly high here," explains Chryssakis.
"We defined external safety zones and risk-reduction measures, looking at the radius which would be affected by an ammonia leak. For the Port of Oslo, we found that in principle using a bunkering vessel with refrigerated ammonia would come with an acceptable risk level, because the residential area in Oslo would not be affected by a leak. But there is still work to be done to ensure safe handling on board."
The Global Centre for Maritime Decarbonisation (GCMD) in Singapore also just recently initiated a study that aims to define a robust set of safety guidelines and operational envelopes that will establish the basis of a regulatory sandbox for ammonia bunkering trials at two local sites. DNV will take the lead in that safety study and supports with ammonia demand forecasting, bunkering site recommendations, the development of conceptual designs of bunkering modes like truck to ship or ship to ship, HAZID/HAZOP/QRA studies, as well as drafting of technical and operational guidelines.
"There are many parts to this puzzle and it's essential that we have them all in place for ammonia to safely enter the marine fuel market," says Hendrik Brinks. "We will need rigorous safety procedures, the inclusion of ammonia in international regulations as well as engine designs that control harmful emissions and allow for straightforward maintenance protocols. And of course, highly skilled crews that are trained to handle ammonia and green ammonia in sufficient supply. Only then can ammonia reach its full potential as one of the most promising green fuels."

DNV Expert

Hendrik Brinks

Principal Researcher

Christos Chryssakis

Business Development Manager

IMO Sub-committee on human element, training and watchkeeping

The 8th session of the IMO's Sub-Committee on Human Element, Training and Watchkeeping (HTW 8) was held remotely from 7 to 11 February. Highlighting the human element as a key factor both for safety and environmental protection, HTW 8 agreed on a revised checklist for considering the human element in the review, development, and implementation of new and existing IMO requirements. HTW 8 also agreed on amendments to the STCW Convention and Code to accommodate the use of seafarers' electronic certificates and documents.

Meeting highlights

- Finalized draft amendments to the procedures for considering the human element in the IMO regulatory framework
- Finalized draft amendments to the STCW Convention and Code for the use of electronic certificates and documents for seafarers
- Finalized draft amendments to the revised guidelines for the development, review and validation of model courses

The role of the human element

The human element continues to play a vital role both for safety and environmental protection, as well as within the increased digitalization of shipping, and the development of new and advanced technologies.

HTW 8 agreed to invite all relevant IMO bodies to assess their respective involvement in the human element and report back. The intention is to develop an outline for a holistic approach to the human element in the IMO rule-making process.

HTW 8 agreed to draft amendments to the "Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies" (MSC-MEPC.1/Circ.5/Rev.2), including a revised checklist for considering human element issues by IMO bodies. The checklist in MSC-MEPC.7/Circ.1 will be revoked accordingly.

The draft amendments will be submitted to MEPC 78 (June 2022) and MSC 106 (October 2022) for approval.

HTW 8 further agreed on a draft guidance framework for the application of casualty cases and lessons learned to seafarers' education and training.

Model training courses

IMO model courses are intended to assist instructors in developing training programmes for seafarers as per the International Convention of Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978. The model courses are subject to regular review to ensure that they are consistent with the current IMO instruments and reflect best practices and modern technologies.

HTW 8 prepared draft amendments to the revised guidelines for the development, review and validation of model courses (MSC-MEPC.2/Circ.15/Rev.1) to facilitate consistent description of the teaching objectives of the various IMO model courses and included guidance on learning outcomes. The draft MSC-MEPC.2/Circ. 15/Rev.2 will be submitted to MEPC 78 (June 2022) and MSC 106 (October 2022) for approval.

Drafting groups will consider the draft model courses submitted to HTW 8 for validation, and report to HTW 9 in February 2022.

Implementation of the STCW Convention

The STCW Convention requires flag states to demonstrate that they have given full effect to the provisions of the STCW Convention and requires them to send reports to the IMO for review.

A correspondence group will consider streamlined guidance for the preparation, submission and review of reports for the communication of such information, and report to HTW 9 in February 2022.

Training, certification and watchkeeping on fishing vessels

With the global fishing industry still showing a poor safety record, HTW 8 continued with its comprehensive review of the STCW-F Convention to ensure that it is updated with relevant training, that it supports other relevant international instruments and facilitates practical implementation.

A correspondence group will continue the work until HTW 9 in February 2022.

IMO Sub-committee on human element, training and watchkeeping (Continued)

Electronic certificates and documents for seafarers
Seafarers' certificates and documents are, to an increasing extent, available electronically. HTW 8 finalized draft amendments to the STCW Convention and Code to accommodate the use of electronic certificates and documents for seafarers. In addition, a draft guideline on the use of electronic certificates was finalized.
The draft amendments and the draft guidelines will be submitted to MSC 106 (October 2022) for approval.

Quality of on-board training
The building of newer and more technically sophisticated ships, along with new IMO requirements, require well trained and educated personnel. A correspondence group will prepare a work plan for the development of measures regarding the assurance of on-board training.

Facilitation of mandatory seagoing service
The STCW Convention requires mandatory seagoing service. However, it has been reported that candidates face challenges in obtaining the required seagoing service. A correspondence group will collate information to identify the difficulties faced in the implementation of the STCW mandatory seagoing service provisions.

Safe operation of onshore power supply (OPS)
HTW 8 considered the personnel, training and familiarization provisions in the draft "Interim guidelines on safe operation of onshore power supply (OPS) service in ports for ships engaged on international voyages".

It was agreed that the guidelines should only address familiarization, as training is already covered through different STCW competencies and the ISM Code. HTW 8 further noted the need to address an inconsistency in the definition of "high voltage" between the draft interim guideless and Regulation I/1.1.44 of the STCW Convention.
The draft interim guidelines will be submitted to MSC 105 (April 2022) for consideration and approval.

Safety for Ships Carrying Industrial Personnel (IP Code)
HTW 8 agreed that the draft new Code of Safety for Ships Carrying Industrial Personnel (IP Code) does not need to include provisions for crowd management training.

Recommendation
As HTW is a Sub-Committee, all decisions concerning rules, regulations and dates are subject to further consideration and approval by the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC), as relevant. DNV recommends that our customers monitor the outcome of MSC 105 in April 2022, MEPC 78 in June 2022 and MSC 106 in October 2022.

Source: DNV

IMO Sub-committee on ship systems and equipment

The 8th session of the IMO's Sub-Committee on Ship Systems and Equipment (SSE 8) was held remotely from 28 February to 4 March. SSE 8 finalized draft new ventilation requirements for lifeboats and liferafts, and draft new guidelines for the design, construction, installation, testing, maintenance and operation of lifting appliances and anchor handling winches. Good progress was made on the new mandatory requirements to minimize the incidence and consequences of fires on ro-ro passenger ships, and on the work to improve the safety of commercial diving operations.

Meeting highlights
- Finalized draft new ventilation requirements for lifeboats and life rafts, together with associated test provisions
- Finalized draft guidelines for lifting appliances
- Finalized draft guidelines for anchor handling winches
- Finalized draft performance-based provisions for dry chemical powders used in fire-extinguishing systems on gas carriers
- Finalized draft amendments to SOLAS and the HSC Codes to prohibit the use of PFOS in firefighting foams

IMO Sub-committee on ship systems and equipment (Continued)

Life-saving appliances

Ventilation of survival craft

SSE 8 finalized draft new ventilation requirements for survival craft to reduce the risk of high CO2 concentrations inside the craft.
The amendments to the Life-Saving Appliances (LSA) Code require totally enclosed lifeboats to be provided with means to achieve a ventilation rate of at least 5 m3/hr/person. The long-term CO2 concentration inside partially enclosed lifeboats and life rafts shall be below 5000 ppm. These amendments were agreed by SSE 7 in 2020.
The amendments are expected to enter into force on 1 January 2026 and will be applied to survival craft installed on or after 1 January 2029, subject to approval by MSC 106 and adoption by MSC 107.
SSE 8 also finalized draft amendments to the "Revised recommendations on testing of life-saving appliances" (MSC.81(70)) to address testing with respect to the new provisions (CO2 less than 5000 ppm) for partially enclosed lifeboats and life rafts. The testing provisions for totally enclosed lifeboats were finalized by SSE 7 in 2020.

Life-saving appliances in polar waters

The Polar Code stipulates that the maximum expected time of rescue should never be less than five days. Recognizing that there could be circumstances in polar waters where the rescue times may exceed five days, SSE 8 considered an operational methodology for estimating exposure times in polar waters.
SSE 8 agreed to include the operational methodology in the "Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters" (MSC.1/Circ.1614).
A correspondence group on life-saving appliances will progress the consideration of:
• LSA evaluation and test report forms for survival craft
• In-water performance of lifejackets
A physical expert group meeting will progress the revision of SOLAS Chapter III and the LSA Code to a goal-based format, subject to approval by MSC 105 (April 2022).

Fire safety

Fire safety on ro-ro passenger ships

SSE 8 progressed draft amendments to SOLAS Chapter II-2 to address the several serious fire incidents that have occurred on vehicle decks on ro-ro passenger ships over the past decade.
SSE 8 agreed to a set of draft amendments for new ships, including:
• Heat detectors and video monitoring
• Specification of structural fire protection of decks within ro-ro spaces when the deluge system cannot cover both levels
• Fire detection and water monitors for weather decks
• Decision support procedure
SSE 8 also agreed to draft new SOLAS requirements for existing ro-ro passenger ships, which includes requirements for new heat detectors and video monitoring on ro-ro decks.
Amendments to the Fire Safety Systems (FSS) Code's Chapter 7 were agreed to address the new draft requirements for fixed water-based fire-extinguishing systems on weather decks, and to Chapter 9 to address the new draft requirement for both smoke and heat detectors for vehicle spaces.
The draft amendments are targeted to enter into force on 1 January 2026, with 1 January 2028 as the implementation date for existing ships, pending finalization at SSE 9 (March 2023) and subsequent approval and adoption by the MSC.
A correspondence group will continue the work until SSE 9. This group will consider the following topics related to fire safety on ro-ro decks:
• Openings of ro-ro spaces and weather deck arrangement
• Interpretation of the term "free height" in IMO MSC.1/Circ.1430
• Development of requirements for heat linear detection systems

Dry chemical powder fire-extinguishing systems

The IGC Code requires ships carrying liquified gases in bulk to be fitted with a fixed dry chemical powder fire-extinguishing system. The "Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk" (MSC.1/Circ.1315) permits potassium bicarbonate powders only, although various mixtures of sodium bicarbonate powders and potassium bicarbonate powders are in use in practice.
SSE 8 agreed to amend MSC.1/Circ.1315 to performance-based provisions, lifting the prescriptive ban on the use of sodium bicarbonate powders.

IMO Sub-committee on ship systems and equipment (Continued)

Prohibition of PFOS in firefighting foams

SSE 8 finalized draft amendments to SOLAS chapter II-2 and the HSC Codes (1994 and 2000) to prohibit the use of fire-fighting foams containing the harmful substance perfluorooctane sulfonic acid (PFOS).

It is important to note that existing ships constructed before 1 January 2026 shall comply with the new requirement no later than the date of the first survey after 1 January 2026. The prohibition will also be applicable to new ships constructed on or after 1 January 2026.

A new module will be established in the IMO's online information database GISIS to make information about PFOS reception facilities available to all stakeholders.

Lifting appliances and anchor-handling winches

A new SOLAS Regulation II-1/3-13, approved by MSC 102 in 2020, requires applicable on-board lifting appliances and anchor-handling winches to be designed, constructed and installed in accordance with classification rules or equivalent rules acceptable to the administration. The intention is to prevent mechanical failure that has regularly caused injuries, fatalities and ship damages.

SSE 8 finalized the associated draft guidelines for lifting appliances and the draft guidelines for anchor handling winches on board ships used for anchor handling operations.

The new regulation will enter into force on 1 January 2026, with retroactive application, subject to adoption by MSC 106 (November 2022).

Validated model training courses

The IMO's model courses are intended to assist course providers in developing training programmes which are consistent with the requirements of IMO instruments. The model courses are subject to regular review and validation.

SSE 8 initiated a revision of model course 3.03 on "Survey of Machinery Installations", with a view to validation of the revision at SSE 9 (March 2023).

Diving systems and hyperbaric evacuation

The non-mandatory Code of Safety for Diving Systems, 1995, provides international standards for the design, construction and survey of commercial diving systems. The purpose is to enhance the safety of divers/personnel, but also to facilitate the international movement and operation of diving systems.

SSE 8 progressed the revision of the Code and the "Guidelines and specifications for hyperbaric evacuation systems" (Resolution A.692(17)) to align with industry guidelines and the regulatory movement over the past 25 years.

The work will continue in a correspondence group until SSE 9 (March 2023).

Unified interpretations

Fire dampers and ventilation duct penetrations

SSE 8 agreed on a draft unified interpretation of SOLAS Regulation II-2/9.7.3.1.2 to clarify that the fire insulation should be provided only to the part of the duct and/or sleeve that is on the same side of the division being fire-insulated.

SSE 8 agreed on a draft unified interpretation of SOLAS Regulation II-2/9.7.3.2 to clarify that no clearance should be allowed between the duct and the division when a duct is passing through "B" class divisions.

Recommendation

As SSE is a sub-committee, all decisions concerning rules, regulations and dates are subject to further consideration and approval by the Maritime Safety Committee (MSC). DNV recommends that our customers monitor the outcome of MSC 106 in November 2022 and MSC 107 in June 2023.

Source: DNV

From DCS to CII and SEEMP III

From 2023, cargo, cruise and RoPax ships should calculate CII with a required rating of C or better. This means some ships will have to improve their carbon intensity. A verified Ship Operational Carbon Intensity Plan, or SEEMP Part III, is to be kept on board from 1 January 2023 to document how you plan to achieve your CII targets.

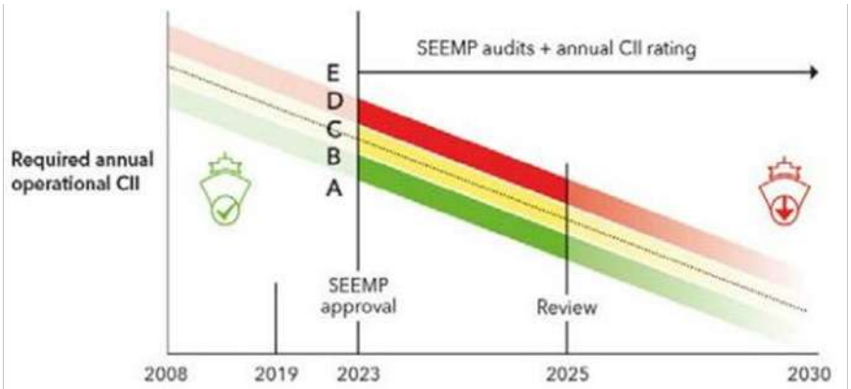
1.1 The Carbon Intensity Indicator (CII) and operational carbon intensity rating

The attained CII is the CO2 emitted per capacity transport work during a calendar year, adjusted by correction factors (to be finalized at MEPC 78 in June) that will be available for some ship types and operations.

Based on its attained CII, a vessel will be rated annually from A to E, where A is the best and C the minimum rating.

The rating system will be the primary mechanism to achieve the IMO's ambition to gradually reduce the carbon intensity of international shipping to at least 40% by 2030 relative to 2008.

The required CII, and thereby the rating thresholds, will be reduced year-by-year. The reduction rates are set for 2023 to 2026, and subsequent reduction factors will be set during a review in 2025.



Year	Reduction from 2019 ref. (mid-point of C-rating band)
2023	5 %
2024	7 %
2025	9 %
2026	11 %
2027-2030	To be decided

1.2 The purpose of the SEEMP Part III

The SEEMP Part III, or Ship Operational Carbon Intensity Plan, will serve as the implementation plan for achieving the required CII and will be subject to verification and company audits. The SEEMP Part III will be a dynamic plan, as it will be subject to regular updates and revisions.

1.3 The CII and SEEMP III timeline in short

- The first DCS reporting year for which a CII will be calculated is 2023, and the first rating will be given in the first half of 2024 based on the 2023 reporting year. Then, the first milestone when a verified SEEMP III shall be on board is 1 January 2023.
- From 2024, the CII must be calculated and reported to the DCS verifier together with the aggregated DCS data for the previous year prior to 1 April, including any correction factors and voyage adjustments.
- The CII will be verified together with the aggregated DCS data.
- The SoC will be issued prior to 1 June as per today; the only difference is that the attained CII and the rating will be noted, and it will be required to keep the SoC on board for five years.
- In case of an inferior rating, meaning a D rating for three consecutive years or one E rating, the SEEMP III must be updated with a corrective action plan and verified before the SoC is issued. The corrective action plan should consist of an analysis of why the required CII was not achieved and include a revised implementation plan.

1.4 Actions plan

Until the adoption of the IMO guidelines at MEPC 78 in June 2022 our Company has started

- calculating the CII, both as AER and as EEOI, to identify possible measures that may be implemented to achieve the target rating for the next three years.
- compiling SEEMP Par tIII

Job Opportunities

In view of the 2018-2023 5 years plan following new positions are announced for 2021-22:

Fleet superintendent, ex Chief Engineer
He will be based in Athens and/or Singapore, belonging to a Fleet Group, reporting to Headoffice, responsibilities as per CP01, fluency in English and computers desirable, Ex Chief Engineer in Roxana Fleet will be also desirable.
Attractive benefits package.

Fleet superintendent, ex Master
He will be based in Athens, belonging to a Fleet Group, responsibilities as per CP01, fluency in English and computers desirable, Ex Master in Roxana Fleet will be also desirable.
Attractive benefits package.

Operator, ex Master
He will be based in Athens and/or Singapore office, reporting to Headoffice, responsibilities as per CP01, fluency in English and computers desirable, Ex Master in Roxana Fleet will be also desirable.
Attractive benefits package.

Dimitris Damdimopoulos's employment

We are pleased to advise you that capt. Dimitrios Damdimopoulos, has joined Roxana and ROKS Technical dept. as of 15February 1922 in the position of Fleet Sup/nt, directly reporting to the Technical Manager, Mr Nikos Giampanis (NG).

Damdimopoulos Dimitrios graduated from the KESEN in 2011, as Captain Class A'.

Since 2011 Mr. Damdimopoulos has sailed in various types of vessels of several major Shipping Companies and holds the Captain's Class A' degree as of 2011.

The professional experience and skills of Mr. Damdimopoulos will definitely add value in our team and will help us meet the short and long term objectives set out by the company.

Dimitri, welcome on board!

ROXANA SHIPPING S.A.

State of the Art In Shipmanagment is our Tradition

Incident Free Effective Efficient