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ΤΜΗΜΑ ΝΑΥΤΙΛΙΑΚΩΝ ΣΠΟΥΔΩΝ

**ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ
ΣΠΟΥΔΩΝ**

**στην
ΝΑΥΤΙΛΙΑΚΗ ΔΙΟΙΚΗΤΙΚΗ**

**TANKER VETTING PROCESS AND THE
IMPACT OF NOVEL CORONA VIRUS
(COVID-19)**

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Διπλωματική Εργασία
που υποβλήθηκε στο Τμήμα Ναυτιλιακών Σπουδών του Πανεπιστημίου Πειραιώς ως
μέρος των απαιτήσεων για την απόκτηση του Μεταπτυχιακού Διπλώματος
Ειδίκευσης στην Ναυτιλιακή Διοικητική

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Τα σχεδόν επτά χρόνια εργασιακής εμπειρίας στον τομέα των επιθεωρήσεων πλοίων, σε μια από τις μεγαλύτερες ναυτιλιακές εταιρίες καθώς και ο ενθουσιασμός μου γι' αυτό το αντικείμενο, αποτέλεσαν πηγή έμπνευσης για τη συγγραφή της διπλωματικής μου εργασίας.

Βασισομένη στις γνώσεις τις οποίες έχω αποκτήσει αυτά τα χρόνια, τόσο στο γραφείο όσο και πάνω στα ίδια τα πλοία, κατέγραψα όλη τη διαδικασία επιθεώρησης και αξιολόγησης των δεξαμενόπλοιων. Οι τελευταίοι μήνες και οι δύσκολες καταστάσεις που επικρατούν εξαιτίας της πανδημίας του COVID-19, επηρέασαν κάθε τομέα και της ναυτιλίας και αυτό αποτέλεσε άλλο ένα κίνητρο ώστε να συμπεριλάβω μια περίπτωση μελέτης.

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Σας ευχαριστώ!!!



Abstract

The term “Vetting” describes accurately the process that an Oil Major follows to evaluate and select at the end the most suitable Tanker Vessel to transfer their cargoes. It is a widespread and accepted process; however, the relevant literature is quite limited, especially from operators’ point of view.

During the first stage a nominated inspector goes on board a tanker vessel in order to check and verify her condition. Then he submits a report, which is called SIRE report. After the submission, the operator of the vessel, has to submit also his / her comments on any noted observation and upload same into OCIMF’s database.

At later stages the Oil Majors will review these reports and other documentation related to the Ship Operator and Vessel, in order to decide and choose the best ship for their job to employ.

An Oil Major needs to assess not only those documents, but also Operators’ Safety Management System and their overall performance. They achieve this by conduction office, or nowadays remote TMSA verification audits. The final results of these audits play a major role in final Oil Companies’ decisions. The vetting as a vessel selection process has earned its place in the industry as a safety net which collects and reviews all the information gathered from the other safety nets; Flag State Control, classification, Port State Control, Class Inspections and others.

The vetting inspections, TMSA Audits and the Maritime industry in general, have been affected a lot by the pandemic of the Corona Virus. However, new practices such as remote inspections have been activated.

A real Case Study will be presented showing the tools that the Vetting Department of a Tanker Management Company uses to achieve industry’s high standards and the required constant development.

Keywords: SIRE Inspection – Vetting – TMSA – OCIMF



Περίληψη

Ο όρος "επιθεώρηση" είναι η συνηθέστερη λέξη που χρησιμοποιείται για να περιγράψει τη διαδικασία αξιολόγησης που υποβάλλονται τα δεξαμενόπλοια από τις εταιρίες πετρελαίου προκειμένου να επιλέξουν αυτές τα πλοία που θα μεταφέρουν τα φορτία τους.

Είναι μια ευρέως διαδεδομένη και αποδεκτή διαδικασία, παρ' όλ' αυτά δεν υπάρχει επαρκής βιβλιογραφία, κυρίως σε ότι αφορά την πλευρά της διαχειρίστρια εταιρίας των δεξαμενοπλοίων.

Κατά το πρώτο στάδιο της διαδικασίας, ένας επιλεγμένος επιθεωρητής ανεβαίνει στο βαπόρι, προκειμένου να διεξάγει έναν φυσικό έλεγχο σε αυτό και να γράψει και να υποβάλει μια έκθεση επιθεώρησης. Μετά την υποβολή αυτής της έκθεσης, η διαχειρίστρια εταιρία πρέπει επίσης να υποβάλει τα σχόλια της σε τυχόν παρατηρήσεις που κατέγραψε ο επιθεωρητής και να εισάγει τέλος την έκθεση μαζί με τα σχόλια στην ηλεκτρονική πλατφόρμα του OCIMF.

Σε μεταγενέστερο στάδιο, οι εταιρίες πετρελαίου θα πραγματοποιήσουν μια ανασκόπηση σε αυτού του είδους εκθέσεις καθώς και άλλων εγγράφων, έτσι ώστε να αποφασίσουν και τελικά να επιλέξουν το πλέον κατάλληλο πλοίο για να ναυλώσουν.

Μια εταιρία πετρελαίου χρειάζεται να αξιολογεί όχι μόνο τα έγγραφα που προαναφέρθηκαν αλλά και τα συστήματα ασφαλούς διαχείρισης των ναυτιλιακών εταιριών καθώς και την συνολική τους επιδοση. Αυτό το πετυχαίνουν διεξάγοντας έλεγχους επαλήθευσης TMSA. Τα τελικά αποτελέσματα παίζουν πολύ μεγάλο ρολο στις αποφασίες που θα παρουν οι εταιρίες πετρελαίου. Η επιθεώρηση ως διαδικασία επιλογής πετρελαιοφόρων έχει κερδίσει τη θέση της στον κλάδο ως ένα δίκτυ ασφαλείας το οποίο συλλέγει και ελέγχει όλες τις πληροφορίες που συλλέγονται από τα άλλα δίκτυα ασφαλείας. Έλεγχοι που προέρχονται απο τη σημαία του κράτους, τον νηογνώμονα, των λιμενικών αρχών και άλλων.

Οι επιθεωρήσεις, οι έλεγχοι TMSA και γενικότερα η Ναυτιλιακή Βιομηχανία έχει επηρεαστεί σε πολύ μεγάλο βαθμό από την πανδημία του COVID-19 που έχει ξεσπάσει τον τελευταίο χρόνο. παρ' όλ' αυτά νέες πρακτικές όπως οι απομακρυσμένες επιθεωρήσεις έχουν ενεργοποιηθεί.

Θα παρουσιαστεί μια πραγματική μελέτη περίπτωσης, που χρησιμοποιεί το Τμήμα Vetting μιας Εταιρείας Διαχείρισης Δεξαμενόπλοιοιων για να επιτύχει τα υψηλά πρότυπα της βιομηχανίας και την απαιτούμενη συνεχή ανάπτυξη.

Λέξεις Κλειδιά: SIRE Inspection – Vetting – TMSA – OCIMF



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Introduction

Although the risk and the accidents in Maritime Industry cannot be totally and definitively eliminated, attempts are being made in order to be mitigated. The only way that the Shipping Community has to follow to achieve so, is to identify the risk, measure and manage it properly. As Mr. L. Grbić, J. Čulin and T. Perković wrote, physical inspections of oil tankers are part of this Risk Assessment process.

Ship Operators and Ship Owners must bear in mind that in order to identify and manage risks in daily operations should define and predict the hazards and then manage the risks, using the proper tools, always in cost effective ways. Ship Operators and Ship Owners take the lead in order Port Authorities, Flag States, P&I Clubs and Classification Societies to follow, identifying and mitigating the risk from their own perspective.

It is obviously that every party involved in Maritime Business, has concentrated its interest in the ways of risk mitigation. A successful Risk Management will not only lead to safe operations but also to efficient cost control of the overall process by which the Oil Majors, charterers and Port Authorities review and manage risk when assessing a ship for future business; this is what we call “Vetting”.

Vetting is the overall process of managing marine risk, using tools and processes to provide data and information of vessels and companies, which are being considered for business. Vetting may be physical inspection (SIRE) or a screening process / assessment. Ship Inspection Report Program (SIRE) addresses concerns about sub-standard shipping in oil industry¹. As regards the physical inspections, OCIMF has put its guidelines and requirements. On the other hand, the screening process is based on rules that Charterers and Terminals have set up. Every Ship Operator who wants to be amongst the leading figures in the Maritime Industry, should maintain and follow a Safety Management System which includes procedures, guidelines and tools for ensuring the overall compliance with the International Regulations and Conventions first and Oil Companies’ requirements onboard its vessels and ashore.

Through the vetting process, the Charterers have the privilege to choose for the next employment the vessel and the Ship Operator, who comply with their Safety standards. OCIMF by maintaining the SIRE program can assure Charterers, undoubtedly, that

¹ L. Grbić, J. Čulin & T. Perković, *SIRE Inspections on Oil Tankers*, 2018



better informed vetting decisions lead to improvements in the quality of vessels, accelerating their continuing drive for safer ships and cleaner seas.

As Mr. Tim Knowles correctly states, the main objectives of vetting are:

- Prevention of marine pollution
- Safety of human life
- Safety of marine life
- Protection of the environment, assets, Charterer's reputation
- Satisfaction of the charterer's shareholders' investments

On the other hand, Charterers screen a ship in order to measure and evaluate their exposure to the risk of an incident. At the end, the outcome of the screening process of available ships and operators, will result in acceptance or rejection of the tanker in question.

This thesis aims to be informative. My working background in the Vetting Department of a Ship Management Company the last years, enabled me to write my thesis from that point of view.

Except of my experience used for this thesis, publications and websites of the Industry parties have been used to complete this project. The final chapter of my thesis – Chapter 4 – consists of a case study on a Greek tanker operator, where a brief analysis of selected targets and KPIs, based on TMSA3, is also presented.



1. THE VETTING INSPECTIONS PROCESS

1.1. The association of OCIMF

The Torrey Canyon incident in 1967, was the main cause of the configuration of the OCIMF association. The Oil Companies International Marine Forum (OCIMF) was formed in April 1970 in response to the growing public concern about marine pollution. This group of companies is a voluntary association of oil companies, which focuses on the safe shipment of crude oil, oil products, gas and petrochemicals. In the early 70s, anti-pollution initiatives were starting to evolve gradually. Forum gave the opportunity to the oil industry to play a more powerful coordinating role in response to these initiatives, making its professional expertise widely available. In 1971, IMO gives OCIMF the permission to presents oil industry views at IMO meetings. Its responsibility is to cover safety, health, security and the environment pertaining to tankers, barges, offshore vessels and terminal interfaces. Additionally, membership is extensive and includes both almost every oil major in the world and the majority of National Oil Companies. All of them together set the standards for continuous improvement, aiming to improve the safety of tankers and protecting the environment. Moreover, Forum holds also two strong tools, the Ship Inspection Report (SIRE) program and the Tanker Management and Self-Assessment (TMSA), both of which have gained worldwide recognition and acceptance. We will analyze those two specific tools and their dynamics at a later stage. Finally, OCIMF's vision is the creation of a global marine industry that causes no harm to people or the environment and its mission is

“To lead the global marine industry in the promotion of safe and environmentally responsible transportation of crude oil, oil products, petrochemicals and gas, and to drive the same values in the management of related offshore marine operations. We do this by developing best practices in the design, construction and safe operation of tankers, barges and offshore vessels and their interfaces with terminals and considering human factors in everything we do.” (OCIMF's website – Organization / Vision and Mission)



1.2. The Ship Inspection Report Program (SIRE) and its stages

In 1993, a unique and very important - as it has been proved - tool was initially launched by OCIMF. This tool is called Ship Inspection Report Program (SIRE). The SIRE system is a huge database, which contains information about tankers and barges.

Since its introduction, not only OCIMF Members and Program recipients but also Ship Operators, use this tool in order to enhance tanker quality and ship safety standards. We could undoubtedly say that OCIMF's goal by creating the SIRE program was to find a tanker risk assessment tool of value to Charterers, Ship and Terminal Operators and government bodies concerned with ship safety.

Program recipients has the opportunity by just clicking on the SIRE website to access at rate of more than 8.000 inspection reports per month. This means, that technical and operational information to prospective charterers and other program users is provided by this program.

Operators / Shipowners wishing to participate in the SIRE Program are required to maintain updated each of their vessel's Harmonised Vessel Particular Questionnaire (HVPQ) and Officers Matrix and Company's Tanker Management Self-Assessment (TMSA) Reports. All of them will be presented.

The shipowner or the operator of a vessel is responsible for the safe operation and the condition of his/her ship. Above can be partly verified by a SIRE inspector during a physical SIRE inspection - vetting inspections, as we call them.

Technical manager's decision to request a SIRE inspection is usually based on specific commercial needs or simply vessel's last SIRE report is about to be "expired". SIRE reports do not work as certificates, which most of them have issue and expiry date, however, is commonly accepted that their validation is for about a period of six months. Practically, this means that on every ship a vetting inspection must be conducted every six months, or twice a year. However, this also depends on oil companies' specific requirements, on charterer's demands and needs, on vessel's age etc. So, once this decision has been made, the company will create and send an inspection request to the selected OCIMF member, either thru SIRE or member's website or by simply sending an email. Simultaneously, the company must also advise vessel's Master for this inspection, in order to give crew sufficient time to organise all required for this inspection documentation and make the final checks on board. The latest version of Vessel Inspection Questionnaire (VIQ), which was revised by the Oil Companies - being members of OCIMF - in February 2019, will also assist them in the preparation.



Furthermore, the nominated inspector is obliged to follow and complete this checklist during every physical inspection, which afterward will guide him/her to write their final report. Inspection reports are maintained on the index for a period of 12 months from the date of receipt and are maintained on the database for 2 years.

Although vetting inspection is non-mandatory, and an oil tanker does not pass or fail it, it is the most important steps in the evaluation process. Considering that many charter parties contain vetting clauses, and that failure to obtain vetting approval may result with costs, it is important to take all necessary steps to demonstrate to the inspectors that cargo can be transported safely.

In general, most of the OCIMF members prefer SIRE inspections during discharging or STS discharging operation, nevertheless there are many reasons for requests not to be accepted. For instance, the terminal does not allow other inspectors to board the vessel, it may be less than 30 days since the last vetting inspection, the selected oil major has no business need to inspect the ship, vessel's operation for this call may be loading and not discharging and many other reasons.

1.2.1. Preparation for a SIRE Inspection – Required documents

As we said earlier, the Company is responsible to inform ship's Captain for the forthcoming vetting inspection. Since it is made known to the crew on board, senior officers should have a meeting to allocate responsibilities and duties in view of this inspection.

During the preparation stage and well before arrival at the port, Captain informs the Head Office and discusses all the possible matters that may occur or exist on board the good vessel. Both sides agree on a correction plan in case of any defect or observation. In cases of equipment's malfunction, where spares are required, the nominated inspector will ask for documented evidence in order to verify action is being taken. That's why it is important for both sides to be in line.

By allocating duties, this practically means that every person on board is responsible for a specific part of the ship. He/she will do their job following the Vessel Inspection Questionnaire (VIQ 7) seventh edition, which was published on February 18th, 2019 and its best practices. This commonly used checklist is divided in twelve (12) different chapters:

- i. Chapter 1: General Information



- ii. Chapter 2: Certification and Documentation
- iii. Chapter 3: Crew Management
- iv. Chapter 4: Navigation and Communications
- v. Chapter 5: Safety Management
- vi. Chapter 6: Pollution Prevention
- vii. Chapter 7: Maritime Security
- viii. Chapter 8: Cargo and Ballast System – Petroleum
- ix. Chapter 8: Cargo and Ballast System – Chemical
- x. Chapter 8: Cargo and Ballast System – LPG
- xi. Chapter 8: Cargo and Ballast System – LNG
- xii. Chapter 9: Mooring
- xiii. Chapter 10: Engine and Steering Compartments
- xiv. Chapter 11: General Appearance and Condition
- xv. Chapter 12: Ice Operations (Note: chapter 12 refers to Ice Class Vessels only)

Additionally, the inspector who will conduct the inspection has to review all the above during his / her stay onboard, which usually takes about 8 hours. Actually, OCIMF requires above 8 hours always within a logical framework approach.

Crew on board has not only to check the condition of the vessel and her equipment, but also, they have to collect and make available a lot of documentation. Here are listed, but are not limited to, some of the required documents:

1. Harmonized Vessel Particular Questionnaire (HVPQ)
2. Officers Matrix
3. Vessel's Certificates
4. Vessel's Manuals or Plans (i.e. Ship to Ship Plan, Water Ballast Management Plan, Mooring System and Line Management Plan)
5. Class Documents and Reports (i.e. Class Status Report, CAP Report if applicable, etc.)
6. Crew licenses
7. Operator's SMS manuals
8. Bridge Logbook
9. Engine Room Logbook
10. Garbage Record Book
11. Oil Record Book (Part I and II)
12. Hours of work / rest records



13. Ship's Records (i.e. Records of Emergency Drills, Maintenance of Firefighting and Life Saving Equipment)

It should be emphasized that, the Technical Management Company is the one who updates and maintains the online VPQ and a recent copy should always be available on board. The VPQ consists of fourteen chapters and every chapter contains technical and non-technical details, about the vessel, her equipment, crew, operator's SMS procedures etc. This questionnaire is totally significant as assists both Oil Companies and Ship Operators vetting departments to reduce time during a possible assessment of a vessel.

1.2.2. The route of the physical inspection

The The great majority of the SIRE accredited inspectors are former seafarers, either deck officers or engine officers, whose experience enables them to exhaustively assess a tanker vessel. The inspectors undertake the inspection looking for objective criteria by which themselves and the Oil company will be able to judge the tanker and its condition. Every inspector has to be accredited by the OCIMF. However, OCIMF does not conduct inspections. The inspectors are either hired by the companies themselves or by a third-party company. These companies are known to the industry as Inspecting Companies. Not every Inspecting Company cooperates with every Oil Major and not all of the inspectors are employed by some Inspecting Company. There are freelance inspectors and inspectors that work only for one Oil major. For instance, the big Oil Major of France, the well-known Total and Repsol, have their own inspectors.

First of all, we have to keep in mind that as an inspector approaches the vessel, the visual inspection begins, and he/she starts creating their first impressions. Since the inspector is onboard, the gangway watch will request for identification and will do the security checks and safety briefing. This is a very crucial part, as no charterer or Port State Control authorities will ever rely on a vessel, which shows gaps on her security control area. Then he / she will be escorted to Master's Office. As previously stated, inspectors have also to follow and answer the questions of VIQ. They will start the inspection at Master's Office by checking ship's certification and documentation (Chapter two of VIQ), spending about two hours. The inspector has the right to make questions both to the Officers and the Ratings to check their knowledge and ability to manage certain situations. Should the inspector is satisfied with vessel's documents,



then comes Deck and Bridge areas, then engine and steering gear room are the final stages. At the end, a closing meeting takes place with the Master's and Officers' participation, where all the noted observations are discussed and recorded. The Master is allowed to make written comments on the observations; a practice which is not preferable by most of the Operators.

During the inspection, inspector has the right to keep notes in order afterwards to redact and fill the inspection Report. Every question of the VIQ 7 checklist has to be answered according to the below table and not deviate from OCIMF guidelines

Box	Option	Response
Y	Yes	Tick "Yes" if, in the inspector's professional judgement assisted by the guidance (if provided), a positive response can be made to the question. If, in the inspector's judgement the Yes response requires to be amplified with further positive comments, the inspector may record such comments in the Comments box. Inspectors should keep in mind, that unless an unusual situation needs to be positively described, then a "Yes" response without comment is adequate.
N	No (counts as observation)	Tick "No" if, in the inspector's professional judgement assisted by the guidance (if provided), a negative response should be made to the question.
N/S	Not Seen	Tick "Not Seen" if the issue addressed by a question has not been seen or checked by the inspector. The reason why the topic or issue was not seen must be recorded in the Observations box.
N/A	Not Applicable	Tick "Not Applicable" if the subject matter covered by the question is not applicable to the vessel being inspected. In some cases, the "Not Applicable" response is made automatically within the software and is subject to the type of vessel being inspected. In other cases, a "Not Applicable" response is not provided to the question and only the "Yes", "No" or "Not Seen" response options are available. If, in the inspector's judgement the "Not Applicable" response requires to be amplified with further comments, the inspector may record such comments in the Comments box. If, in the inspector's judgment an explanatory comment is necessary, the inspector may make such comment in the "Comments" section accompanying the question provided such comment makes amplification to assist the understanding of a report recipient as to an issue associated with a specific question.
Observations and Comments		An Observation by the inspector is required for a "No" or "Not Seen" response. Where the question specifically calls for inspector comment irrespective of how the response box is checked, such comments are required to be recorded in the "Comments" section that accompanies the question. Inspectors are free to record comments even where a box is checked "Yes" provided such comment makes amplification to assist the understanding of a report recipient as to an issue associated with a specific question.



Additional Comments	The Additional Comments section at the end of each chapter may be used to record comments in respect of the chapter that are additional to those which the inspector may make when responding to the specific questions. ²
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Table 1-VIQ Guidance notes to inspectors

Apart from the observations, inspectors may also add positive comments or best practices they faced on board a ship at the section of “Additional Comments”.

1.2.3. A SIRE Inspection Report – Details included

As already mentioned, inspectors use the VIQ 7 / edition 2019 as a guide. So, they are guided by this checklist and on their notes, they kept on board during the inspection in order to complete the SIRE Report. The inspectors must prepare the report and write down their comments of the inspection quite soon. If an Inspecting Company is involved, the inspectors must pass the SIRE report to their Manager to check and approve it. One way or another, the vetting report must be sent within twenty-four (24) hours to the Oil Major’s Vetting Department, in order the Head of this department to give the final approval. After his / her review and approval the report is uploaded in OCIMF database and the operator gets automatically informed, receiving also a copy of the uploaded report. Then the operator has to respond / comment on every noted observation and then to submit the final report to the SIRE database within fourteen (14) days, else a report will be generated without operator’s comments. Vessel Operators have to reply also on any wrong comment of inspector, otherwise Oil Majors could reject them. In general, a SIRE Report in its first pages (section one and two) contains information and details such as:

- i. A unique Report Number
- ii. Report Template (the version of the VIQ on which is based on)
- iii. Vessel Name
- iv. IMO Number
- v. Date of Inspection
- vi. Port of Inspection
- vii. Inspecting Company
- viii. Selected variants
- ix. Time taken for inspection
- x. Name of the inspector (this information is only for the inspecting company)

² VIQ 7.0.05 – OCIMF – 18 February 2019



- xi. Vessel's operation at the time of the inspection
- xii. Product(s) being handled
- xiii. Name of the vessel's operator
- xiv. Date of the last port State control inspection
- xv. Crew details for Deck Officers and Engineers

And then comes the section three, with a number of selected VIQ questions to be presented and answered by the inspector, based on what he got during the inspection. All questions answered with “No” are observations and presented as below:

7.15 Are the crew aware of the company policy on the control of physical access to all shipboard IT/OT systems? Y N NS NA
Inspector Observations: USB ports on the computers, ECIDS, Radar and Course recorder were not physically blocked or locked to prevent unauthorised access to these terminals.

As we said, Vessel Operators have to reply on wrong observations. The form of such observations may be as below:

6.9 Is there a USCG approved Vessel Response Plan (VRP)? Y N NS NA
Other Inspector Comments: The VRP had not been received at the time of inspection.

This case concerns a new built vessel, however, the operator has to inform the interested members that vessel’s Vessel Response Plan is under preparation by operator’s Qualified Individual (QI).

1.2.4. Uploading of a SIRE Report on OCIMF

Once the Operator receives the notification from OCIMF that the SIRE Report is available on the SIRE database, has fourteen calendar days to respond. The Ship Operator is obliged to upload comments, corrective and preventive actions, relevant photos or documents for each of the recorded observations. By the time the operator uploads the report, it remains on vessel’s profile for twelve (12) months.

OCIMF also provides to operators the following tool: they can make subsequent comments on existing reports, which assists operators to follow up the “open”



observations. They can also add supportive evidence, which helps them to prove the proper closure of the observation status.

OCIMF members have the opportunity for the rolling period of these twelve months, to access and view the SIRE reports at a nominal cost. So, the Ship Operators should use this tool of adding subsequent comments, in order to avoid any negative result from possible assessment of their vessels by an OCIMF member for future business. After the period of the first twelve months, the reports are being archived for twelve more months. OCIMF Members, Oil Companies, Terminal Operators, port / canal authorities and Oil Traders have access on payable demand into the OCIMF database. On the other hand, Governmental Bodies, who are responsible for the supervision of safety and pollution prevention (e.g. Port state control authorities, MoUs etc.) access the OCIMF databases free of charge.

In case of unfortunate inspection results, Ship Operators, as common practice, used to arrange another new SIRE inspection in order to restore vessel's status. OCIMF forbade this tactic and now thirty days are required to pass since the last SIRE inspection date, for a new inspection arrangement.

1.3. Assessment of a SIRE Report

In order to understand better this process, we will try to present the assessment of a SIRE report from Oil Majors' / Charterers' perspective. A successful vetting gives the vessel the greatly desired and of high importance "ticket to trade". However, this is not enough for the next job.

Oil Majors, Charterers and independent vetting companies carry out the tanker vetting. Big Oil Companies retain their own in-house vetting department. Either a vetting department is in-house or outsourced, has a main role to select the proper and capable vessel to transfer the oil safely. A positive SIRE report assists in the first good impression, but charterers will ask additionally many more documents and technical questionnaires, depending on which Oil Company is involved in the potential employment. It is said that a vetting inspection is simply a snapshot in time. For example, an accident, an incident or a major change, such as change of ownership, Flag Administration and Classification Society, may affect the entire process and the final decision of the Charterer.



1.3.1. The screening process of a tanker for a next employment

The screening process may fairly vary from one Oil Company to another, but the target of all Companies remains the same. They aim to find and employ the Oil Tanker Vessel that absolutely matches to their needs.

All parties involved in a vessel's employment give efforts to achieve the final clearance, or approval as usually stated; nevertheless, the final decision is up to the Charterer and its Vetting and Commercial Department.

Usually, the process was carried out by an experienced ex-mariner based on his or her judgment and criteria and of course on the gathered information. Nowadays the process has been changed and evolved to a multiplicate one and requires techniques such as decision modeling and risk evaluation. As time is passing too fast, charterers' decisions have also to be made instantly. To achieve this, Oil Companies' vetting departments gather information for the on water ships on a continuous basis and keep this information up-to-date.

Based on the following flow chart and according to Mr. Tim Knowles'³ view a need of cargo is raised by the Charterer. They use their risk evaluation process to assess all documentation collected for each vessel and then the results are compared to their predefined standard of acceptance.

³ Flowchart of the Screening Process, Tim Knowles, 2010



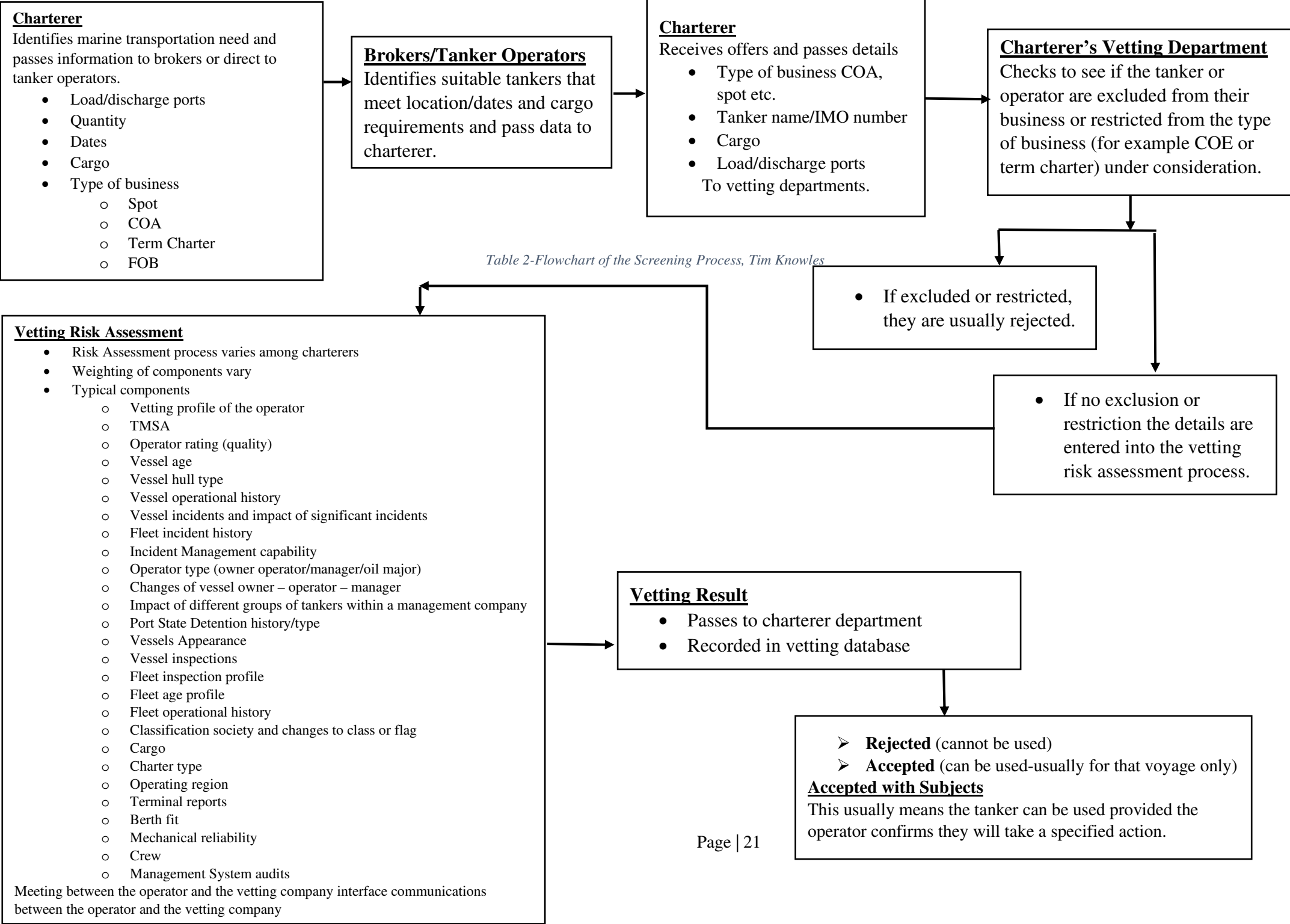


Table 2-Flowchart of the Screening Process, Tim Knowles

- **Stage 1:** Charterers pass to brokers or direct to Tanker Operators their chartering needs, giving them necessary information for load - discharge ports, estimated days (ETA - ETB), quantity and type of cargo, type of business (Time Charter, Spot etc.)
- **Stage 2:** Brokers and Tanker Operators offer the suitable tankers that meet their requirements and send the specific information (Tanker name, IMO number etc.).
- **Stage 3:** Charterers receive the offered vessel's information and pass the details to their Vetting Department.
- **Stage 4:** The Vetting Department checks to see if the vessel or the operator are excluded from their business or restricted from the type of business (for example COE or term charter). At this stage, the ship is handled on case by case.
 - If the available information of the ship excludes or restricts her from prospective business, the ship will be rejected automatically. Factors that may lead to a rejection are:
 - Last SIRE inspection with negative results
 - Port State Control detainable deficiencies
 - An incident
 - Overall poor fleet performance
 - Failure to supply requested vetting data
 - Involvement in an incident with other fleet vessel, the causes, corrective and preventive actions of which have not been accepted by the charterer
 - Ongoing mechanical problems
 - Unresolved issues raised by a terminal (Letter of Protest (LOP))
 - Tanker Operator's low score of TMSA.
 - If none of the above is applied and there is no exclusion or restriction, then the vessel's details and data are entered into the Vetting Risk Assessment process.
- **Stage 5:** Risk Assessment Process varies among Charterers; therefore, the weighting of components also varies. Typical and most common components are:
 - i. *Vetting Profile of the operator*; OCIMF database provides information about fleet status.



- ii. *TMSA audit results*; operator's score must be minimum two (2) in order to meet at least IMO requirements.
- iii. *Operator rating (quality)*; operator's KPIs indicating how effective is the Operator's Safety Management System and the overall performance on OCIMF, PSC databases, Lloyd's List, Equasis platform etc.
- iv. *Vessel age*; as younger the vessel, the most competitive it is, however it should not be taken for granted. Vessels above 15 years old are assessed based on stricter criteria and usually it is required to be set under a structural review.
- v. *Vessel hull type*; nowadays vessels must be double hull.
- vi. *Vessel Operational History / Vessel incidents and impact of significant incidents*; charterers will choose a vessel that has not been involved in any unpleasant situation among other that may have been involved.
- vii. *Fleet Incident history*; operator's relevant KPI must not exceed the industry's average.
- viii. *Incident Management capability*; in case of a recorded incident, the full investigation report is requested by third parties. In significant incidents, meeting with the Charterers would be absolutely useful in order to have the details and circumstances of the incident explained.
- ix. *Changes of vessel owner – operator - manager*; play a role in the final decision. When there are such changes, relevant documentation is requested for review. i.e. Management of change, new Certificates. For the purpose of the SIRE Program, an 'Operator' is defined as the company or entity which exercises day to day operational control of, and responsibility for, a vessel. The name of this entity can be found in the vessel's Document of Compliance.
- x. *Impact of different groups of tankers within a management company*; it may affect the final decision. Sister vessels to be identified.
- xi. *Port State Control history*; as PSC history follows a vessel until it gets scrap, special attention is paid on this criterion. Some Oil Companies handle PSC detentions as a major incident. Undoubtedly a PSC detention has the worst impact throughout not only vessel's life but also for the Operator's profile.
- xii. *Visual Appearance*; vessels being in good condition show compliance with Company's maintenance procedures and Industry requirements. Chapter



eleven of the VIQ describes the general condition and appearance of the vessel.

- xiii. Vessel Inspections;* During a screening assessment, charterers may request additional clarifications, additional documents or photographs on the noted observations. Well addressed and adequately applied corrective actions in time, ensure the Charterer regarding Operator's safety management effectiveness.
- xiv. Fleet inspection Profile;* except of the assessed vessel's profile, Charterers check Operator's profile as per Fleet inspections results, which may determine that:

 - A specific ship has a poor inspection profile in comparison with the rest of the fleet vessels.
 - A group of ships may have passed inspections without any observation.
 - Specific observations are repeated among the fleet vessels.
 - Number of observations per inspection (usual KPI) is either increasing or decreasing.
 - Number of deficiencies per inspection (again a common KPI) is either increasing or decreasing.
 - A group of ships has not received deficiencies during PSC inspections.
 - A group of ships within the fleet performs better or worse than the rest groups of the fleet.
- xv. Fleet age profile;* again this constitutes a competitive advantage.
- xvi. Classification Society and Changes to Class or Flag;* Generally, a change of flag or class by itself is not enough a vessel to fail the subjects.
- xvii. Cargo;* the type of transferred cargo of a tanker vessel may affect the cause or consequences of an incident.
- xviii. Charterers type;* The longer the relationship between Operator and charterer is, the easier to get in a Time charter business. As long as a Charterer often cooperates with a ship operator, it is easier operator's fleet vessels to get fully fixed.
- xix. Operating Region;* previous and current trading areas affect the choice of vessel for requested employment. Especially if this refers to an operating area with higher requirements of safety appliances. Moreover, a charterer may reject a vessel because of her last voyages to "banned" ports.



- xx. *Terminal Reports*; most of the times, this information is received internally by the charterer or the agent and in case of negative feedback, Operator is obliged to reply and comment on noted observations. Again, some Terminals and Oil Majors will require a full Incident Investigation Report from operator's side in order to check and evaluate their compliance and corrective / preventive actions.
 - xxi. *Berth Fit*; it is requested mostly by Terminals to ensure that the vessel fits to their facilities and can reach and leave the port safely. (draft, air draught, length overall (LOA), length between perpendiculars, deadweight, pumps and manifold capability etc.). Otherwise, the vessel cannot be accepted.
 - xxii. *Mechanical reliability*; the maintenance management and procedures of the Operator is of high importance in order a fleet vessel to be accepted or not.
 - xxiii. *Crew*; human factor plays one of the major roles in a vessel's performance.
 - xxiv. *Management system audits*; they are held at operator's premises and carried out by the Oil Majors. Nowadays, these audits are carried out remotely.
 - xxv. *Meetings between the operator and the vetting company - interface communications in between*; as in all business, good and friendly personal contacts, and direct communication assist in the progress of the system.
- **Stage 6:** The vetting result is passed to the Chartering Department, where same is being recorded in their vetting database. Their programs will analyze the potential risk and will give one of the three results:
- a) Accepted: the vessel can be used, usually for one voyage only
 - b) Rejected: the vessel cannot be used
 - c) Accepted with Subjects: the vessel can be used, provided that the Ship Operator confirms his acceptance and compliances with specific requirements and conditions. Usually this acceptance is for one voyage.

A minimum safety level of ships is maintained by the complex regulatory framework of the International Maritime Organization (IMO), with over fifty conventions regulating all aspects of international shipping. There are, however, some loopholes in the system. In particular, substandard shipping activities can create distortion of competition among ship owners, which can lead to incidents. Shipping incidents tend to carry very high economic costs, due to the large asset values and the high operational risks involved in shipping. However, safety inspections, by Classification Societies and



Flag Administrations for example, including also vetting inspections by Oil Majors, can lead to cost savings at the end of the day. For industry inspections, the savings range from 94 to 170 thousand dollars for dry bulk (median: 17–33 thousand), and from 137 to 379 thousand dollars for tankers (median: 44–131 thousand). It is not surprising that the cost savings of industry inspections are higher, especially for tankers, since industry inspections are much more extensive than port state control inspections. The gains are larger for tankers than for dry bulk carriers.⁴

1.3.2. Screening process outcome

Although the screening process is a very time demanding issue, every Chartering Department has to make commercial decisions as quickly as possible. In this respect, the vetting process must also meet that demand. So, as previously stated, the information should be always available and up to date by all sides and ready to be forwarded.

The outcome of a screening process, as Mr. Tim Knowles wrote, used to be a statement in writing, which was showing that a vessel is approved and in some cases the duration of this approval was also for a specific period of time. Oil Companies, in order to avoid the misuse of such statements, and after the casualty of the Erika in 1999, have stopped this practice. Instead, an Oil Major makes clear that a vessel has been assessed at a specific moment in time for a specific employment. More specifically, they may simply send an email to the owner stating that no further information is required for the time being and they will not re-assess the vessel for a certain period. This does not mean that the Oil Major gave Ship Operator an approval. A common message of theirs is the following: “Please be advised that we do not carry out vessels evaluations on request neither do we pre-approve vessels for X (Company’s Name) or affiliate service. Vessels are evaluated for each and every voyage selected by our Charterers”. Such approvals are mainly called “Single voyage approvals”.

However, still the Ship Operators may be asked to declare a certain number of Oil Majors approvals before the final agreement. Those approvals are often stated in charter parties, according to the INTERTANKO publication on vetting clauses. In such cases, ship owner is usually referring to the period of SIRE inspections validity. The owner

⁴ Sabine Knapp, Govert Bijwaard, Christiaan Heij, Estimated incident cost savings in shipping due to inspections, 2010



cannot be sure that the vessel is accepted. So, when a vessel is under a screening process and a Chartering Department asks for various information, documentation etc., Ship Owner tends to provide the requested “Oil Major Approvals” stating the following: “to the best of our knowledge and belief, the ship was approved by the following oil majors” and then namely states the Oil Companies.

1.4. Oil Companies Specific Requirements

The vetting criteria varies amongst the Oil Majors, but typically in most cases and in order a vessel to be considered as acceptable to an Oil Major, at least the following must be met:

- i. The ship must have a good safety record.
- ii. All fleet vessels within the same Ship Manager should have a good safety performance record.
- iii. The “Crew Matrix” and Company’s Safety Management System must be as appropriate.⁵
- iv. There must be a recent (no more than six months old) SIRE inspection report with minor or, even better, no findings.

We could say that a mutual goal for all the Oil Companies is the vested interest in reducing the risks involved in maritime business. It is clear, that the human factor plays a major role within risk management. So, the quality and expertise of a seafarer, will assist in the implementation of an effective Safety Management System and this is one of the most significant indicators of Risk Management.

Based on previous, most of the Oil Companies have their own requirements regarding the Senior Officers on board a vessel. Let us see how we could rephrase this thing, referring on the below table of Officers Matrix compliance requirements of an Oil Major

⁵ Helen Mc Comick, Oil Major Vetting & Approvals, 2010



Officer Matrix Compliance Analysis	
Requirements For:	
Years with Operator	Req. Value
■ Combined aggregate for Master and C/O shall not be less than 2 calendar years.	2.0 years
■ Combined aggregate for C/E and 2/E shall not be less than 2 calendar years.	2.0 years
Years in Rank	
■ Combined aggregate for Master and C/O shall not be less than 3 years seetime.	3.0 years
■ Combined aggregate for C/E and 2/E shall not be less than 3 years seetime.	3.0 years
Years on All Types of Tankers	
■ Combined aggregate for Master and C/O shall not be less than 6 years seetime.	6.0 years
■ Combined aggregate for C/E and 2/E shall not be less than 6 years seetime.	6.0 years
Years as Watch Officer/Engineer	
<input type="checkbox"/> If 2 junior deck officers onboard, aggregated experience as OOW should not be below 12 months.	1.0 years
<input type="checkbox"/> If 2 junior deck officers onboard and 1 junior deck officer has less than 6 months as OOW, the other should have a minimum 12 months as OOW.	1.0 years
■ If 3 junior deck officers onboard, aggregated experience as OOW should not be below 18 months.	1.5 years
<input type="checkbox"/> If one of the 3 deck officers is below 6 months seniority as OOW then one of the 2 other ones should be minimum 12 months as OOW	1.0 years
■ If 3 junior deck officers onboard, 2 of the officers must have at least 6 months experience as OOW.	2.0 officers
<input type="checkbox"/> If 2 junior eng officers onboard, aggregated experience as EOOW should not be below 12 months.	1.0 years
<input type="checkbox"/> If 2 junior eng officers onboard and 1 junior eng officer has less than 6 months as EOOW, the other should have a minimum 12 months as EOOW.	1.0 years
■ If 3 junior eng officers onboard, aggregated experience as EOOW should not be below 18 months.	1.5 years
<input type="checkbox"/> If one of the 3 eng officers is below 6 months seniority as OOW then one of the 2 other ones should be minimum 12 months as OOW	1.0 years
■ If 3 junior eng officers onboard, 2 of the officers must have at least 6 months experience as EOOW.	2.0 officers
Date Joined	
■ Master and C/O should not board at the same time.	1.0 days
■ C/E and 2/E should not board at the same time.	1.0 days

Picture 1-Officers Matrix Compliance

We could practically say that, it would be definitely a negative observation, if Master and Chief Officer or Chief Engineer and Second Engineer have:

- X The same joining date
- X Aggregated time with current operator less than 2 years
- X Aggregated time in rank less than 3 years
- X Aggregated experience in tanker type vessels less than 6 years

Except of the abovementioned, several components are considered as weights for each of the Oil Companies. However, the Big Players of the oil industry, like BP, Chevron, ExxonMobil, Total, Shell etc. are those who set the standards actually and as the industry gets updated and synchronized, more substantial factors play significant role in the vessel screening process and selection. For instance:

- a) A non double hull vessel, most probably, would be rejected during a screening process.



- b) Age is also a factor that could lead to non-selection. Many of the companies do not accept vessels more than 20 years old, no matter how good and satisfactory her general condition is.
- c) Tanker Manager's TMSA submission must not be more than 12 months old.
- d) Condition Assessment Program (CAP) is also a contributed factor, as most of the Oil Majors require Tanker Vessels to meet program's requirements and hold relevant certificate. Additionally, some of them require minimum CAP 2 rating for hull and machinery equipment.
- e) Majors accept vessels, which are classified by full members of IACS.
- f) Port State Control detentions in the last one or two years could lead also to a rejection of a vessel.

Last but not least, all Oil Companies looking for vessels, which are in compliance with International Conventions and Regulations, Flag State laws, Classification Society Rules, Port State Control requirements, Local Port Authorities regulations, provisions and recommendations of the maritime industry (IMO, SIGTTO, OCIMF).

1.5. The evolution of the SIRE Program

As the Shipping Industry evolves constantly, it is noticed that there are changes on its risk profile. Market affords nowadays more sophisticated risk measurement and management tools. In order the SIRE Program and OCIMF to remain truly effective, its people are working on its enhancement. This enhancement is related to today's and future maritime environment. The updated risk based vessel inspection program will replace the current one and will be called "SIRE 2.0". The new regime will more accurately report on the quality of a vessel and its crew (on an ongoing basis) and indicate future likely performance. OCIMF focuses on four key areas for the new program: Accuracy, Capability, Reliability and Adaptability.

1. Accuracy: a try to ease the identification and management process of key safety and operational risks onboard a vessel.
2. Capability: the inspectors will be trained as appropriate in order to meet the highest quality, consistency, and integrity.
3. Reliability: Strengthening vessel inspections and reducing the number of repeat inspections required.
4. Adaptability: More rapid response to human factors, industry changes, regulatory framework updates and technology advances.



More in-depth reporting outcomes following a risk-based approach, enhanced Pre-Inspection processes, strict monitoring protocols during inspections, the use of web-enabled tablet devices in real-time, updated policies and procedures and optimization of training courses are some of the factors that are going to assist in program's enhancement.

OCIMF aims by creating initiatives to improve vessels inspections. All inspection requests will be made through an OCIMF portal. Requests will be validated and compared with the program's over-arching rules to ensure they meet OCIMF's requirements and a compliant and qualified inspector is nominated. The inspection template will be populated prior to the inspection with a series of information including pre-inspection questionnaire, vessels' particulars, incident data, certificates, past inspection observations, Port State Control Inspections data and relevant photographs and plans. Under the SIRE 2.0, inspectors are going to use a different Vessel Inspection Questionnaire (VIQ). Now the inspection questionnaire will be a risk-based questionnaire, which will be generated using bow-tie methodology. Questions will focus on these four key areas:

1. Core: The minimum questions required to meet the members' fundamental risk assessment criteria.
2. Rotational: The questionnaire algorithm will ensure that all non-core questions are covered over a period of time and that each inspection template is designed for a defined duration.
3. Conditional: Specific questions based on the available data on the vessel, operator or ship-type.
4. Campaign: Area of specific focus from OCIMF and its membership requiring time-limited exposure.

As we have already discussed, during the inspection, inspectors will use a tablet. This will provide photographic verification to support the findings, allow GPS tracking, auto-logging of start and finish times, and auto-submission of inspection reports improve the overall quality of the inspection report and facilitate the expanded inspection template and support the delivery of the four-tier question set.

To conclude, each inspector will be given the opportunity to assess observations against grades of yes. When giving a non-compliant observation, the tablet will auto-open an editor that allows a granular assessment of the observations including a breakdown by equipment, procedures and human factors.



2. TANKER MANAGEMENT SELF ASSESSMENT (TMSA)

2.1. TMSA Program / Historical Data

The SIRE program was OCIMF's first attempt to make the Technical Management Company take part in the chartering process, by being able to inspect ships and management companies consequently, that do not meet the requirements for safe and secure cargo transfer.

Nevertheless, OCIMF in the process of improving its practices, dared to implement an additional tool, which could provide to its members the capability of the further monitor and assess the management company's procedures and whether it complies with legislation and best practices.

OCIMF named this tool Tanker Management Self-Assessment (TMSA). The OCIMF TMSA program was firstly introduced in 2004 and was developed to benefit the tanker operators as a tool to help them to assess, measure and improve their Safety Management Systems. Since then two updates have been published. The first one on July 1st, 2008, where the TMSA program was revised to TMSA2, in order to update its content and to incorporate any changes that had occurred at legislative level as well as to incorporate the new best practices. And the second one, was in April 2017, when TMSA2 gave its place to TMSA3, showing in practice that the process of continuous improvement is a principle embraced by the program itself and not just something that is required only by the participants in this program.

TMSA Program's main objective is to provide the "best practice guide for Tanker Operators". Actually, the TMSA program complements IMO Conventions, Codes and Circulars and is intended to promote self-regulation and continuous improvement of the safety Merchant Shipping. The implementation of those conventions and codes is included in Operator's SMS manuals covering both vessel and shore management process. An efficient Safety Management System is also required for companies to achieve excellent performance regarding Health and Safety matters.

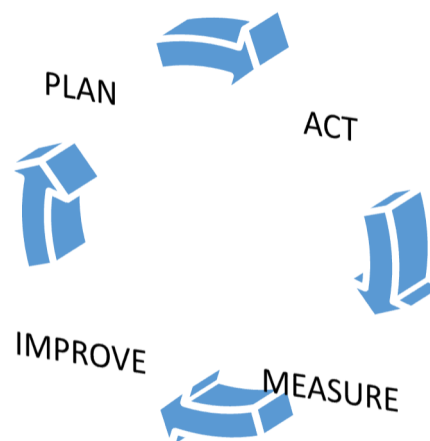
The program encourages tanker operators to assess their Safety Management Systems against specific Key Performance Indicators (KPIs) as a guide and measure of best practice. It provides a minimum expectation (level 1) plus three levels of increasing best practice guidance. It also invites operators to review their Safety Management



System regularly, which will help them to lead their system to continuous improvement. Same will be spread and applied on all their fleet vessels.

OCIMF's belief for continuous improvement is based on the famous PDCA (Plan, Do, Check, Act) or Deming Cycle. With slightly changed the components of this cycle, TMSA uses the following key elements: Plan – Act – Measure – Improve.

- ✓ **Plan:** Develop plans that include effective strategies to provide clarity in company policies, objectives, procedures and responsibilities. Set company's goals, vision and mission and align them with strategy.
- ✓ **Act:** Meet the company's objectives through consistent and effective implementation of plans. Clear and straight communication of company's policy to all ship and shore personnel is required.
- ✓ **Measure:** Proper recording and evaluation of results from the "Act" stage above, along with reporting of any noticed gap between the results and the original plan.
- ✓ **Improve:** Recorded gaps of Stage "Improve" define the new targets and actions to be taken. Implementation will lead to improvements of the company's Safety Management System.



Picture 2-Key components of continual improvement cycle TMSA3

2.2. TMSA Elements and Key Performance Indicators

In the context of the TMSA, Key Performance Indicators help tanker operators measure the effectiveness of their Safety Management System and, in general, the efficiency of its aims and objectives. Companies use the information contained in TMSA to assess



their SMS, ranked in levels 1 to 4, for each of the 13 elements. It is up to the Company's management discretion if they use KPI data as a standalone decision making tool, or in conjunction with any management tools they currently use for improvement.

At the end of a Self-Assessment, the Management Company will have a clear view of its Safety Performance. Using the data and KPIs extracted from their review and assessment, they could identify any observations or discrepancies of their System and then they will be in the position of planning their next moves to achieve the desired improvement.

The TMSA 3 elements are thirteen (13) and as follows:

- Element 1: Management, Leadership and Accountability
- Element 1A: Developing and Maintaining a Safety Management System
- Element 2: Recruitment and Management of Shore-based Personnel
- Element 3: Recruitment and Management of Vessel Personnel
- Element 3A: Wellbeing of Vessel Personnel
- Element 4: Vessel Reliability and Maintenance
- Element 4A: Vessel Reliability and Maintenance (Critical Equipment)
- Element 5: Navigational Safety
- Element 6: Cargo, Ballast, Tank Cleaning and Bunkering Operations
- Element 6 A: Mooring and Anchoring Operations
- Element 7: Management of Change
- Element 8: Incident Reporting, Investigation and Analysis
- Element 9: Safety Management – Shore-Based Monitoring
- Element 9A: Safety Management – Fleet Monitoring
- Element 10: Environmental and Energy Management
- Element 11: Emergency Preparedness and Contingency Planning
- Element 12: Measurement, Analysis and Improvement – Inspections
- Element 12A: Measurement, Analysis and Improvement – Audits
- Element 13: Maritime Security

As we can get informed by Intertanko website, Intertanko members' average level is 2.42 for the period 20/10/2019 to 20/10/2020, statistics that result from 2449 reports⁶.

⁶ <https://benchmarking.intertanko.com/Benchmark/VIQ>



The Third Edition of the TMSA (TMSA3) has been revised to incorporate the latest legislation, technology developments, current issues in best practice management, and feedback from TMSA users – the Management Companies. Although the TMSA program was originally designed for tankers and barges operators, it may now be useful for companies operating other types of ships.

The main differences between the previous and the latest version of TMSA are summarized as follows:

- a) More detailed description of best practices, that complements and explains what is expected from each Key Performance Indicator
- b) The description of best practices has been revised so that there is clarity and there are no duplications
- c) Removal of the option “Not Applicable” to mark KPIs
- d) Streamlining and consolidation of elements to improve consistency and make conducting the self-assessment easier
- e) Import of updated industry legislative requirements, including the Manila Amendments to the Maritime Labor Convention 2006, the Ballast Water Management Convention and the Polar Code
- f) Elements 6 and 6A - Cargo, Ballast, Tank Cleaning, Bunkering, Mooring and Anchoring Operations, have been revised with additional KPIs and best practice guidance
- g) Element 10 – Environmental and Energy Management (in the past was Environmental Management), incorporates now the OCIMF Energy and Fuel Management paper that was a supplement to the 2nd edition of TMSA2
- h) A totally new Element: Element 13 – Maritime Security
- i) Twenty-five (25) Key Performance Indicators have been moved from a higher stage to a lower one (e.g. from Stage 4 to 3, from Stage 3 to 2, etc.) and eighty-five (85) new Key Performance Indicators have been introduced. There are nineteen (19) more Key Performance Indicators than in TMSA2.

We could say that TMSA Audits follow quality management. As Mr. Idelhakkar says, quality management is the prospect of internal adjustment of organizations and It is located in a management model, to absorb some shortcomings.



2.3. TMSA verification Audits

Tanker Operators' Safety Management Systems are assessed during the TMSA audits by certified auditors. As Mr. Tim Knowles ascertains, the operator's management capability and performance are, for many, two strong and highly weighted factors in the vetting process. Therefore, although the information regarding the tanker ship itself remains important, the assessment of the operator may be even more important. Someone could say that TMSA is a "leading indicator", which was based on an Oil Majors "trick" or a predictor of fleet performance. The satisfactory result from a TMSA audit is one more "ticket to trade".

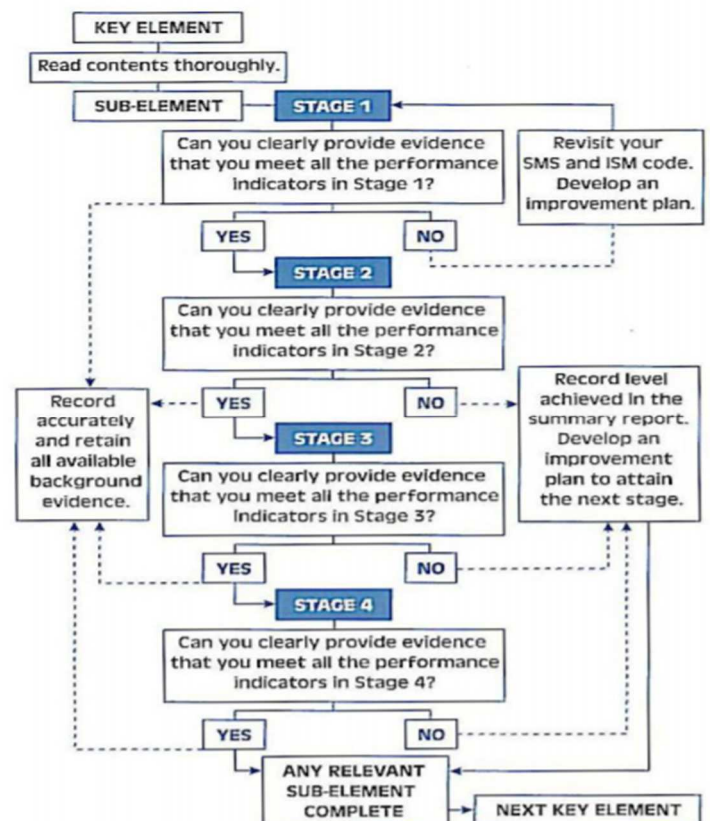
The number of Vetting Organizations that demand provision of TMSA and the verification of it is constantly increased. Even more, should the business refers to a long Time Charter (T/C) employment, TMSA verification is a validation tool for operator's profile.

TMSA gives through its guidelines a draft for the entire audit process. The qualified auditor, who acts on behalf of an Oil Company, can choose one of the thirteen elements, and determine with some accuracy whether or not the operator's self-rating is rational.

The most usual process to audit a Ship Management Company is to check the validity of the level as determined by the operator, based on specific Key Performance Indicators.

During a verification audit, Management Companies should have the relevant KPIs data available, so that they can practically prove the compliance with their SMS immediately. This information can simplify the verification process and greatly reduce the estimated time of preparation and duration of the TMSA Audit. This process makes auditor's life easier.

The results of the conducted TMSA verification audits should remain confidential between the two parties.



Picture 3-TMSA Stages Flowchart



On completion of the audit, any findings are discussed with the assessed company's management. On a later stage, the company has to keep the assessing oil company advised with their relevant corrective action status. Additionally, the operator may wish to review and update the submitted TMSA report as part of their continual improvement process.

It is worth to mention that nowadays the TMSA audits are held remotely.

2.4. Submission to OCIMF database

The submission of TMSA is electronic via OCIMF website. First of all, the Operators must register in this database and create their account by also paying relevant fee. Then they can submit their TMSA report.

By submitting a report, the management company has the right to control and approve which OCIMF members have access to that report. They maintain full control of their data. As per industry requirements, companies are advised to review and update information in the TMSA database online at least once per six months, but this is not a rule.



3. THE IMPACT OF THE NOVEL CORONA VIRUS (COVID-19)

3.1. The Impact of COVID-19 on SIRE Inspections

The global Corona Virus pandemic has daunted many industries, and the global gas, oil and petrochemical transportation industry does not constitute an exception of this crisis. Vetting inspections have been also impacted due to virus circumstances and limitations. OCIMF has foresaw 20% reduction on SIRE inspections, according to its publications, mainly in regions, where it is difficult to get an inspector into a port, or a terminal or to arrange transport. Indeed, many Ship Operators are facing challenges regarding the inspections and industry's requirements, as in many ports and terminals around the world, embarkations and disembarkations are not allowed or there are strict limitations. However, OCIMF tries to assist in arrangements, always complying with the international regulations and restrictions regarding this pandemic. As we have already explained many times, for Oil Companies and their vetting departments the SIRE inspections are critical tools for ensuring the safety of tankers. Consequently, OCIMF has implemented key measures to support program users and members, keeping always in mind that the health and safety of all those involved in the inspection process, such as vessel operators, inspectors, crews, OCIMF members and report users, is of utmost importance.

Since the COVID-19 outbreak, OCIMF has implemented the following measures:

1. Increased the availability of SIRE inspection reports from 12 months to 18 months. This gives report users and OCIMF members a more extensive choice of available screening information and reduces the need to renew inspections in the short-term.
2. Set up a Task Force to investigate alternative inspection strategies and methods in the short and mid-term to mitigate the impact of COVID-19 on the Inspection Programmes and users, including vessel operators, ship personnel and inspectors.
3. Issued comprehensive Inspection guidance aimed at enhancing the safety and protection of all program participants. Guidance is updated regularly.
4. Suspended all Inspector training and accreditation activities, including Audited and Accompanied Inspections.



5. Engaged with other associations in the oil and gas industry to jointly identify and address the impact on the maritime industry due to COVID-19 pandemic.
6. Introduced a new facility that allows submitting companies to identify where inspectors are located, in relation to specific terminals. This allows Submitting Companies to choose inspectors residing closest to the planned port of inspection reducing the distances inspectors would travel.

Regardless, the crisis created due to the Corona virus, vessel operators and charterers must continue to uphold safety and environmental standards throughout this situation. If a member wishes to proceed with an inspection after operator's request for safety reasons, they should liaise with the operator to ensure both the vessel crew and the inspector are able to conduct the inspection, complying with the COVID-19 health and safety precautions.

Due to the COVID-19 pandemic and enforced port and travel limitations globally, Travelling Policies and Guidance were temporarily changed. In order to avoid exposure to the virus, the guidance of most governments to their citizens is to avoid international travels and, in some cases, movements within a country are also not allowed. Those restrictions can be altered at really short notice. However, when commissioning a vessel inspection, the Submitting Organisation and the Tanker Operator should have processes in place to consider the health and safety of the nominated inspector, crew and the general public.

3.1.1. Shipping Industry Members' Announcements for COVID-19

On March 26th, 2020, the Paris Memorandum of Understanding (MoU) on the Port State Control (PSC), after perceiving the challenges that the Shipping Industry is facing, released a Circular Letter. In that letter, the Paris MoU made clear that its people work to help Member Authorities protect the health and safety of their ports (ports that are located mainly in Europe and the north Atlantic) and also the shipboard personnel. Further, among the acknowledgments that Paris MoU has done, they tried to support supply chains to be kept open and they admitted that nowadays is very difficult for a ship owner to arrange vessel surveys.

Another difficulty lies with the required by the Standards of Training, Certification and Watchkeeping (STCW) and Marine Labour Convention (MLC) trainings, that the seafarers need to attend regularly.



The general situation that the virus has created, convinced the people of Paris MoU to recognize that the flexibility on handling such circumstances and difficulties is the only way. A pragmatic approach and the cooperation with Flag States is the key. Port State Control Authorities now have temporary measures and criteria regarding the impact of delays for surveys, inspections and audits, extended periods of services on board, extensions of validity of the ship's certificates, and delaying periods for personnel certification. A pragmatic approach regarding those issues would be taken on a case by case basis for up to three months period.

3.2. Temporary Guidelines for Conducting a SIRE Inspection during Covid-19

OCIMF has set temporary guidelines for conducting a SIRE inspection during the Corona Virus pandemic, which assist in the protection of the inspectors, crew on board the vessels and terminals staff from that virus. Those guidelines and measures of OCIMF, which are presented in this section, may only reduce the risk of Covid-19 transmission. Unfortunately, the risk of a crew member or an inspector of being infected and then further spreading the infection is always there.

As we have already discussed, OCIMF by itself does not arrange or have any involvement in the commissioning activities of Submitting Companies. The decision is up to the Submitting Companies in agreement with the operator, who first asks, usually, for an inspection. For sure, the Tanker Operator should carefully evaluate the need of such an inspection, in order to minimize the exposure of their crew on board, inspectors and terminal staff to potential transmission.

Submitting Company's role is to work and agree with the nominated inspector, or with his / her company – the Inspecting Company as we have seen, on a plan in advance. One of the most important issues is the Personal Protective Equipment (PPE) of the inspector, which is required to be used during the inspection, being always in accordance with the international and local requirements. Moreover, Submitting Companies urge inspectors to:

- a) Wash their hands regularly and avoid touching their face (mouth, nose and eyes)
- b) Maintain the social distancing when it is possible
- c) Practice respiratory hygiene
- d) Wear medical masks and dispose off them properly



- e) Stay at home, not travel to the Vessel if he / she does not feel well and inform the Operator

OCIMF guidelines also include the reporting process of exposure to COVID-19.

Inspectors should:

- a) Follow all national, regional and local requirements restricting travel and reporting of Covid-19 exposure or infection.
- b) Follow the local and national directives regarding self-isolation, where applicable.
- c) Be aware that Submitting Companies and OCIMF will each have a privacy policy that governs what they can and cannot do with any data provided to them by the Inspector.
- d) Notify the Submitting Company and OCIMF, as appropriate, of any Covid-19 exposure or infection onboard an Inspected Vessel in a period from 14 days before or after an inspection.
- e) Notify OCIMF, as appropriate, if they are diagnosed with Covid-19 or have developed symptoms of Covid-19, as soon as possible.
- f) Cease all inspection activity after a diagnosis of Covid-19 until they are permitted to return to work by the national, regional or local government regulations in force in their home location and the location of any future inspections.
- g) Stop all inspection activity after contact with a person with suspected Covid-19 for 14 days, or until a test confirms that they do not have Covid-19.
- h) Notify OCIMF, if they are exposed to an individual with suspected Covid-19 symptoms during a program inspection.
- i) Notify national, regional and local authorities where they live and to jurisdictions where they have transited, travelled or carried out inspections, of any Covid-19 exposure or diagnosis.

Furthermore, before inspector's boarding, both parties – inspector and operator – should complete and exchange the COVID-19 pre-boarding questionnaires. Those two questionnaires, one for the inspectors and one for vessel's personnel, include questions related to body temperature, COVID-19 symptoms, cases of COVID-19 on board and / or close contacts of them etc.

Ship Operators by their side, have set their own specific guidelines, which must be followed by all vessels crew. Ship Operators try to inform as much as possible their



seamen regarding the precautions. The following measures we are going to present, constitute common practice and have been taken by many Greek Shipping Companies. Ship Operators have created and circulated health letters and health alerts, which should be also included in their Safety Management System manuals, in order to reduce the risk of the transmission of the virus onboard. Operators demand to be completed relevant Health Declaration / Questionnaire, which applies to all Crew members, technicians, inspectors, auditors and subcontractors who are planned to board in any fleet vessel. Crew Department shall request from crew members to complete / answer the Health Declaration prior to join a vessel. Head of Departments must request and receive the completed Health Declaration by any technician or subcontractor who has been appointed to attend a Fleet vessel. The duly completed Health Declaration must be returned to Ship Operator's Departments at 48hrs prior the individuals' flights or embarkation to the vessels. This Health Declaration usually includes or should include questions such as:

1. Do you have a fever AND respiratory symptoms like cough or shortness of breath?
2. Have you had close contact with a person infected with COVID-19 or history of travel?
3. Are you having difficulty breathing, unable to eat or drink, or too weak to care for yourself?
4. During temperature measurement: Do you experience fever (person feels warm to the touch, gives a history of feeling feverish, or has an actual measured temperature of 100.4°F [38° C] or higher)?
5. Do you have persistent cough?

The purpose of such Health Letters and Alerts by the Ship Operator is to:

- Manage the identified risk related to COVID-19
- Protect both shore and shipboard personnel from being affected by the virus by taking preventive measures and communicate any updated actions decided
- Give guidelines and prepare the vessels which call in high risk ports
- Confirm that arrangements are made onboard and ashore for the proper treatment of:
 - a) patient who is under investigation
 - b) personnel who is affected by COVID-19



- Train vessels' personnel
- Ensure the business continuity and continuous support of the Fleet by the Company, through the development of a contingency plan
- Ensure continuous monitoring, updating of the Fleet on the developments and implement additional measures considering the alert level
- Establish measures to manage risk due to crew changes

All of the action plans and procedures should be established based on the World Health Organization (WHO), International Maritime Organization (IMO), International Labour Organization (ILO), International Chamber of Shipping (ICS), Flag Administration, Hellenic – should we talk about Greek Operators – Ministry of Health.

Let us see now some of the operator's responsibilities:

1. Develop a Risk Assessment for COVID-19 and adjust or add measures to control the risk based on the updated information.
2. Issue Health Letters to provide information on the virus, symptoms, hygiene measures, to communicate Operator's Plan for managing risks related to COVID-19 spread to all involved and update them following the developments
3. Agree and adjust the standard items to be supplied to Fleet and liaise with the Purchasing Department for the timely supply
4. Provide a training package on how to reduce the risks
5. Establish an action plan for vessels to call high risk areas
6. Arrange ship-shore exercise for emergency preparedness
7. Establish Contingency Plan in case a crew member shows symptoms
8. Issue instructions to be followed by subcontractors or technicians prior boarding, during their stay on board and define actions to be taken by crew upon their disembarkation
9. Give travel instructions to be followed when crew changes are carried out
10. Planning crew changes following the port restrictions developments
11. Coordinate the crew changes to be successfully carried out
12. Cooperate with Manning Agents to ensure their compliance with operator's measures linked with COVID-19
13. Ensure that crew changes and travel instructions are handed over to on / off signers and documents are completed as required
14. Update the Fleet with port restriction developments weekly



15. Cooperate with Training Department to organize Training Seminars and coordinate online seminars
16. Suspend shore assignments
17. Provide information to Officers and Crew families when requested
18. Monitor WHO recommendation and provide updates on preventive measures
19. Ensure quarantine implementation for shore or shipboard personnel when needed
20. Review the Health Declarations of vessels subcontractors prior boarding
21. Provide clarifications and guidance to the Fleet when requested

All vessels worldwide are required to dispose masks, gloves, disposable overalls, antiseptic gel, infrared thermometers, COVID-19 test kits.

Last but not least, visitors' control is also of utmost importance. Before the vessel's arrival at port, departments shall contact external parties to limit onboard attendances. Third parties shall follow operator's preventive measures when onboard. The assigned personnel at the gangway must wear a complete disposable overall and the temperature of all visitors should be recorded, as they board (including pilots and port authorities). The visitors must be accompanied inside the accommodation, where their temperature will be tested by means of infrared thermometers, as the use of non-intrinsically safe devices is prohibited in open decks and dangerous areas, since we talk about Tanker Vessels.

3.3. Remote Inspections under the SIRE Program

On August 18th, 2020, OCIMF made officially known the launch of its entirely new tool within the Ship Inspection Report (SIRE) Program. The tool is the Remote SIRE inspections, which are now under the SIRE Program.

The transmission of the virus created dramatic results on vetting inspections as well. So, OCIMF undertook to find the best solution, in order not only to minimize the risk of virus transmission during vetting inspections but also to keep its members happy and ahead of the game, by continuing conduct vetting inspections. Therefore, OCIMF, after many trials of this tool and after the Management of Change (MOC) implementation of the alternation on the past procedures, announced its launch.

The Remote SIRE Inspections as a method, is a temporary measure, according to OCIMF statements. They constitute an additional and temporary option for the members to consider as part of their marine assurance and risk assessment process.



Based on my personal experience, I would say that it is an absolutely time and focus demanding job, both for vessels and shore personnel.

The people of the Submitting Company are those who give or not the option to a Vessel Operator for a Remote Inspection. The Operator of a vessel again, in this case, requests an Oil Major for an inspection through the usual channels and the Oil Major will finally decide on case by case basis. The acceptance of a remote inspection cannot be guaranteed in advance.

3.3.1. Factors affect the decision for a Remote Inspection

People of OCIMF will not influence Oil Major's decision to choose a remote inspection instead of a physical one, however they offer many reason and factors, that could affect the final decision. Some of those factors are, but not limited to:

1. The risk of COVID-19 transmission during a physical inspection.
2. The existence of cases and / or symptoms of COVID-19 onboard the vessel to be inspected.
3. The vessel's location and previous ports of call.
4. Travel restrictions associated with the vessel's location.
5. Recipient's and Charterer's requirements.
6. The possibility of booking and conducting a physical inspection at a later date that will satisfy the submitting company's requirements.
7. The possibility that recent vetting inspection reports are available which satisfy the submitting company's or Programme Recipient's requirements.

Since the Submitting Company has decided that a remote vetting inspection could be conducted, both the vessel operator and the appointed inspector will be notified via automated messages through their SIRE accounts.

3.3.2. The Process of Remote SIRE Inspections

The process of a Remote Vetting Inspection requires from Inspectors and Vessels Operators to fill and review three questionnaires in total.

- a) ***Operator Data-Submission Questions:*** Must be answered by the Vessel Operator. Some of the selected Operator Data Submission questions have additional guidance, including which are the requested for uploading documents.



- b) **Remote Inspection Questions:** The questions must be answered by the inspector in charge. Most Remote Inspection Questions have additional guidance including which documents need to be uploaded by the operator and reviewed by the inspector.
- c) **Guidance notes:** These are notes that are meant to assist both the Operators and the Inspectors in answering questions that are specific to the conduct of Remote Inspections under OCIMF Program.

The selection of the Inspection Questionnaire variants lies with the Submitting Company and the nominated inspectors. Those two will work together and decide afterwards the inspection variants.

At the same time, Vessel Operators will be provided with a link to the Inspection Editor which will allow them the access to the Operator Data-Submission questions and guidance notes. Into this online editor, a vessel operator should fill online some selected questions from the Vessel Inspection Questionnaire (VIQ), with the usual answers / choices: Yes, No, Not Applicable.

Now the Operator evaluates his / her vessel and becomes inspector for a while in a general sense. To begin with, when the vessel, according to them, is in compliance with a question and its associated guidance notes, they should answer the Operator Data Submission question by selecting Yes (“Y”). Where the Operator believes that the vessel may not follow the relevant guidance notes, they should answer the Operator Data Submission question by selecting No (“N”) and should add a referential comment. Moreover, where the Operator believes that the question and the associated guidance notes are not applicable (NA) for the type of their vessel, they should answer the Operator Data-Submission question by selecting Not Applicable (“NA”) and add a comment, stating the reason.

At least two days prior nominated inspector’s engagement with the vessel, the operator must upload the pre-defined list of certificates, vessel’s and crew documents to the relevant online fields, respond to all Operator Data-Submission questions, which follow the VIQ questions and submit his / her declaration stating that their answers, certificates and documents are the most recent versions available.

On the other hand, the selected inspector must:

- a) Review all vessel certificates and documents uploaded by the Operator.
- b) Review all responses and comments made by the Operator.



- c) Respond to 'Remote Inspection Questions' by using information and data provided by the vessel and by engaging with the vessel personnel.
- d) Have attended online training session provided by OCIMF in order to be able to carry out a Remote Inspection under OCIMF Program on behalf of any Submitting Company.

In reviewing the responses and answers given by the operator, the Inspector should note and confirm the following:

- a) When Operator's answer is Yes (Y), Operator's declaration is required. Those responses should only be changed in case the inspector is able to provide his / her reasons for making that change.
- b) Where the Operator has answered No (N) in any of the questions, these will be supported by operator's comments, explanation and objective evidence, for example an expired certificate. The inspector is obliged to review those comments and documentation and then evaluate them before raising an observation on those items. The comments made by the Operator must be remain unchanged by the inspector, in the comments box or must be removed completely.
- c) Where the Operator has answered the questions as Not Applicable (NA), again, these will be supported by comments and explanation stating so, provided by the operators themselves.
- d) Operator Data-Submission Questions must not be changed to Not Seen by the inspectors, as on the one hand, they cannot be on board the vessel physically in order to verify the evidence, and on the other hand, due to the lack of sufficient documentary evidence provided by the Operator.
- e) The inspector has the right to ask the Operator or the vessel to upload additional documents for scrutiny if deemed necessary.

We said before that the inspectors, among others, must respond to 'Remote Inspection Questions' by using information and data provided by the vessel and by engaging with the vessel personnel. This could be succeeded in the following ways:

- a) Telephone or video calls from the Vessel – where indicated, the Inspector should conduct interviews with selected vessel personnel and ensure that:
 - i. Such calls are set up in advance and in agreement with the vessel.
 - ii. The identities and capacities of personnel who will be interviewed are confirmed.



- iii. There is no adverse impact on the vessel operations because of the engagement.
 - iv. There is no adverse impact on the rest hours of the personnel interviewed and involved at that time in the inspection.
- b) Email communications with the Vessel and / or Operator – the Inspector may communicate with the Vessel or the Operator to request information, clarification relating to inspection questions or data submitted by the Operator or to request additional documentation. Any telephone or video call may be scheduled by Email exchanges.
- c) Certificates Repository and Inspection Documents Repository – Inspector’s access to the repositories is granted as soon as they are assigned with the booking code, but first the Vessel Operator has to create a New Inspection into SIRE Editor, using that booking code.

3.3.3. Validation and submission of Remote Inspection Reports

The completed Inspection Questionnaire must be submitted by the nominated inspector to the Submitting Company in order to be reviewed and then they will validate the report. In addition, the Submitting Company must validate the report uploaded to the Program website following OCIMF guidance “Inspection Program Report Validation: Best Practice”. Eventually, in the Inspection Report will be included a notation, next to the template name on the cover page, that the inspection was a Remote one under OCIMF Program.



4. CASE STUDY- Tanker Operator’s Action Plans and overall Performance during Covid-19, against specific KPIs

In order to recap and summarize all the above, this thesis includes a case study of an actual Management Review Meeting (MRM). The Management Review Contents have been prepared by the HSQE and Vetting Department of a Greek Tanker Operator of 48 tanker vessels. The Tanker Operator will be hereinafter called “ABC”, as due to confidentiality of the following sensitive data, the actual name of the Management Company and its vessels cannot be revealed. However, all data, numbers and the analysis are retrieved by Company’s MRM for the second quarter of 2020 (Q2 2020). For our convenience we will use year’s quarters as follows: Q1: January, February, March - Q2: April, May, June - Q3: July, August, September - Q4: October, November, December.

The Management Review Meetings of the Company ABC are held quarterly with the participation of the Heads of each of the Company’s departments. The scope of such meetings is to be presented and recognized the company’s position and performance according to the settled vision and Safety Management System monthly, quarter and annual targets. The basic tool that those presentations rely on is the TMSA and its thirteen Elements. Regular reviews on its contents in accordance with the targets, as they are set by the Company’s procedures are required.

The main objective of the Element 12, which is the main element that companies use to analyze their Vetting and HSQE Key Performance Indicators (KPIs), is to establish a system of effective inspection and audit programs that measure the compliance with the Industry standards and monitor the condition of the fleet vessels.

Our Company Case ABC has in its possession 48 Tanker Vessels, where 33 of them are VLCCs, 13 are Suezmax and 2 are Aframax, with average age 9,4 years. The graph below depicts in more detail Fleet Average Age per vessel type.



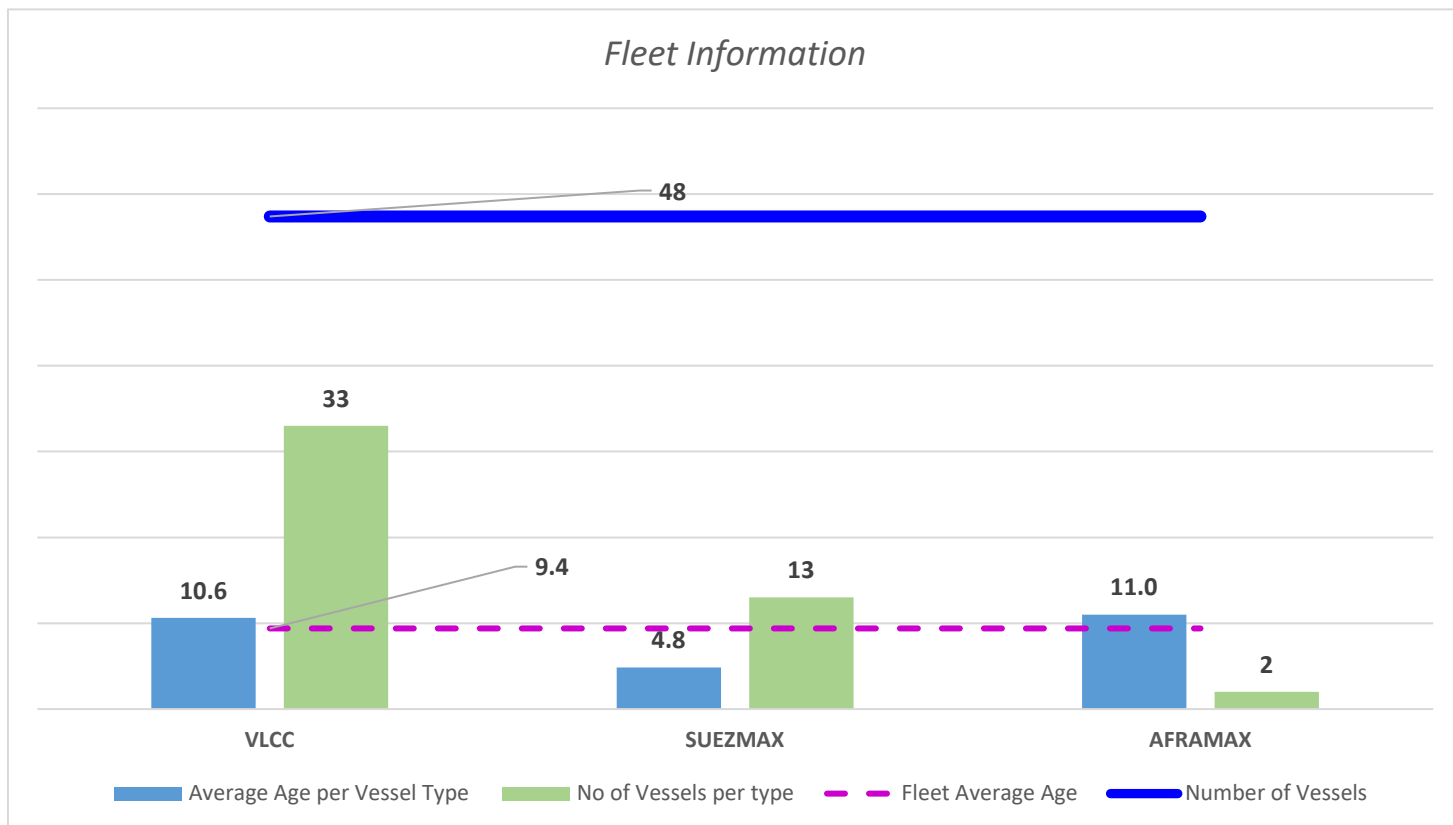


Figure 1-Fleet Information

Due to recent pandemic, the company has developed a Management of Change (MOC) to identify all the related hazards and take all the necessary measures. The following preventive measures are applied to protect all employees, seafarers, contractors and supernumeraries from the COVID-19. On top of that, all subcontractors prior boarding the vessel must complete the Health Declaration form and comply with the Company’s Health COVID-19 preventive measures. Even though Company ABC’s Mission and Vision were reviewed by the Management Review Meeting members and remain unchanged, in light of the COVID-19 epidemic, the Company ABC’s SWOT analysis was reviewed and updated to include the effects and potential impact of COVID-19.

- **STRENGTHS:** financial health, people (expertise, commitment, skills, teamwork, flexibility), fleet, (size, age, quality), Management Commitment to quality, safety records, decision making, network, innovation, IT infrastructure, In-House Medical Advisor.
- **WEAKNESSES:** Management skills (planning, communication, delegation, coaching, mentoring, strategic), lack of strategy, alignment, gap vessel – office, lack of experienced seafarers, low profile.



- **THREATS:** environmental legislation regulation (technology lagging), war of talent limited pool of seafarers and resistance to change, market drop, competition, geopolitical instability, disease – pandemic (COVID-19), loss of process due to restrictions above company’s control.
- **OPPORTUNITIES:** environmental regulations, knowledge & processes from the industries, technology, geopolitical instability, shipping investment opportunities, commercial market advantages, incorporation of positive changes / remote working.

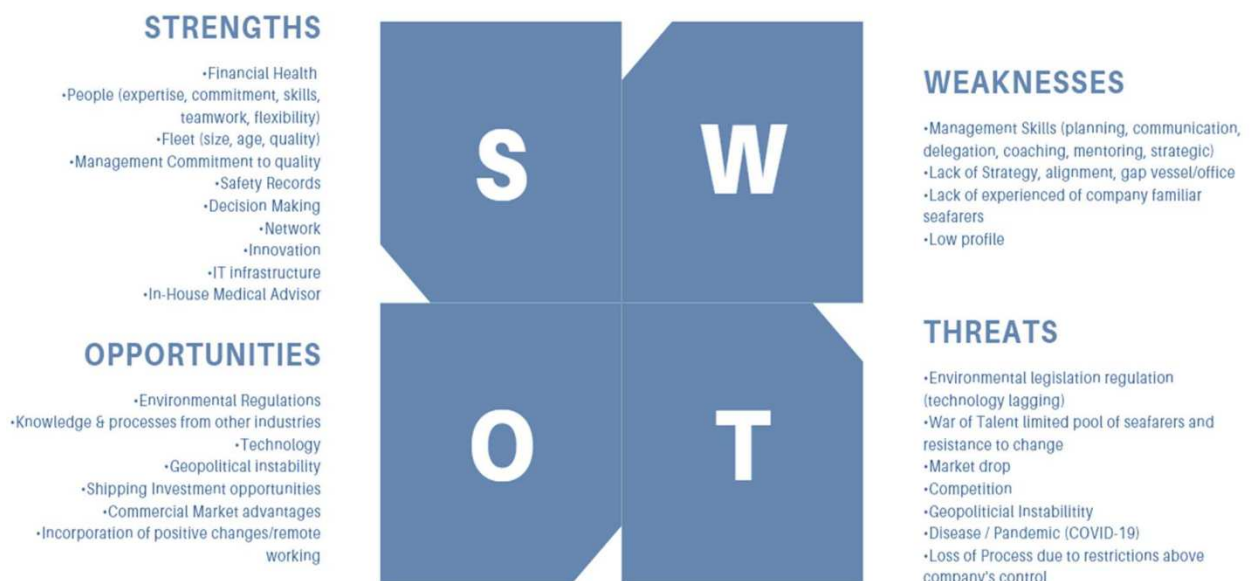


Figure 2-SWOT Analysis

Company’s Activities

During Q2 2020, Departmental activities, in line with the company’s strategic plan, were altered and adapted to meet COVID19 circumstances and enforced safety related barriers. All meetings with third parties were either postponed or carried out via web portals such as: Teams, Webex, Skype etc. Briefing and debriefing of all seafarers were conducted remotely from all Company ABC departments – via telephone or web portals.

Remote Internal Audits

Due to the inability of company personnel to attend fleet vessels, and in line with RO & Flag Administration guidance, remote Internal Audits were performed. The remote



Internal Audits were carried out, following a specific Circular letter, by trained and qualified office personnel.

In order to control and provide guidance for the remote Internal Audit process, the Circular Letter, provides clear instructions for:

- a) How the internal audit process will be conducted
- b) Responsibilities of all relevant parties (Onboard auditors, ashore auditors & Designated Person Ashore - DPA)
- c) Preparation & Planning
- d) Reporting and Follow up
- e) Competency / Training of Audit Teams

To further facilitate the audit process, an Internal Audit Checklist was created and attached to the above mentioned circular letter. Within the audit process stipulated above, the Internal Audit Report & Checklist are to be completed and submitted to the HSQE Department, for relevant follow up and filing.

Remote Training

Although some training seminars and workshops were postponed due to COVID19 safety measures, most of the seminars and workshops were conducted remotely.

Travelling Policy

Due to the COVID-19 pandemic and enforced port and travel limitations globally, ABC's Travelling Policy was temporarily revised in February, to prohibit the travelling of all office personnel to mainland China. In March the Travelling Policy was again revised to include prohibitions including European Union travel. The travelling policy along with relevant restrictions and controls are constantly updated in line with the epidemic's developments.

Operations Performance Indicators

Despite all the circumstances of Corona Virus the ABC's fleet continues to expand in favorable market conditions, its services are extended to an increasingly growing pool of loyal customers, hence the steady increase of the volume of products transferred depicted below and the increase of port calls. The number of voyages carried out by Company's fleet has also seen an increase, largely due to favorable spot market



conditions. We notice an increase of 2,73% on the numbers of calls and a 2,34% on Voyages.

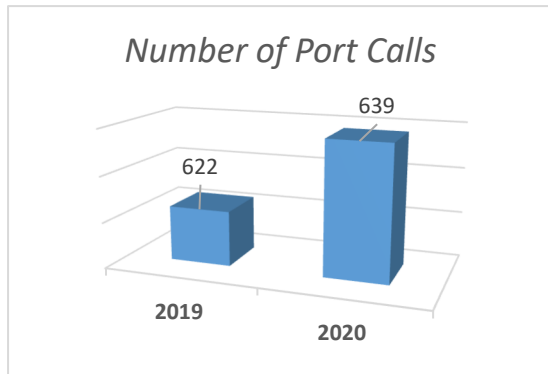


Figure 4-Number of Port Calls

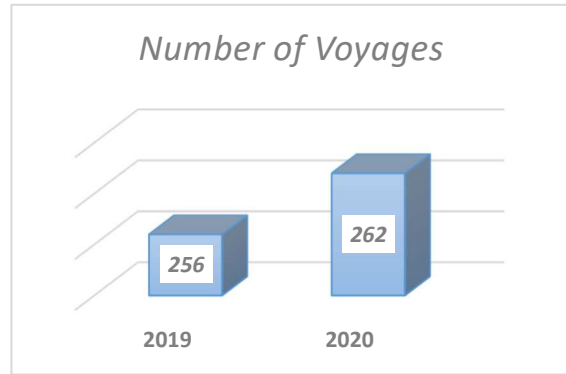


Figure 3-Number of Voyages

Vetting Key Performance Indicators

Vessel Inspections are conducted throughout the Company's fleet by Oil companies, to ensure suitability for business. The SIRE inspection results are monitored and trends are identified and followed up.

The below graph depicts the average of the last 4 quarters observations per SIRE inspection per vessel.

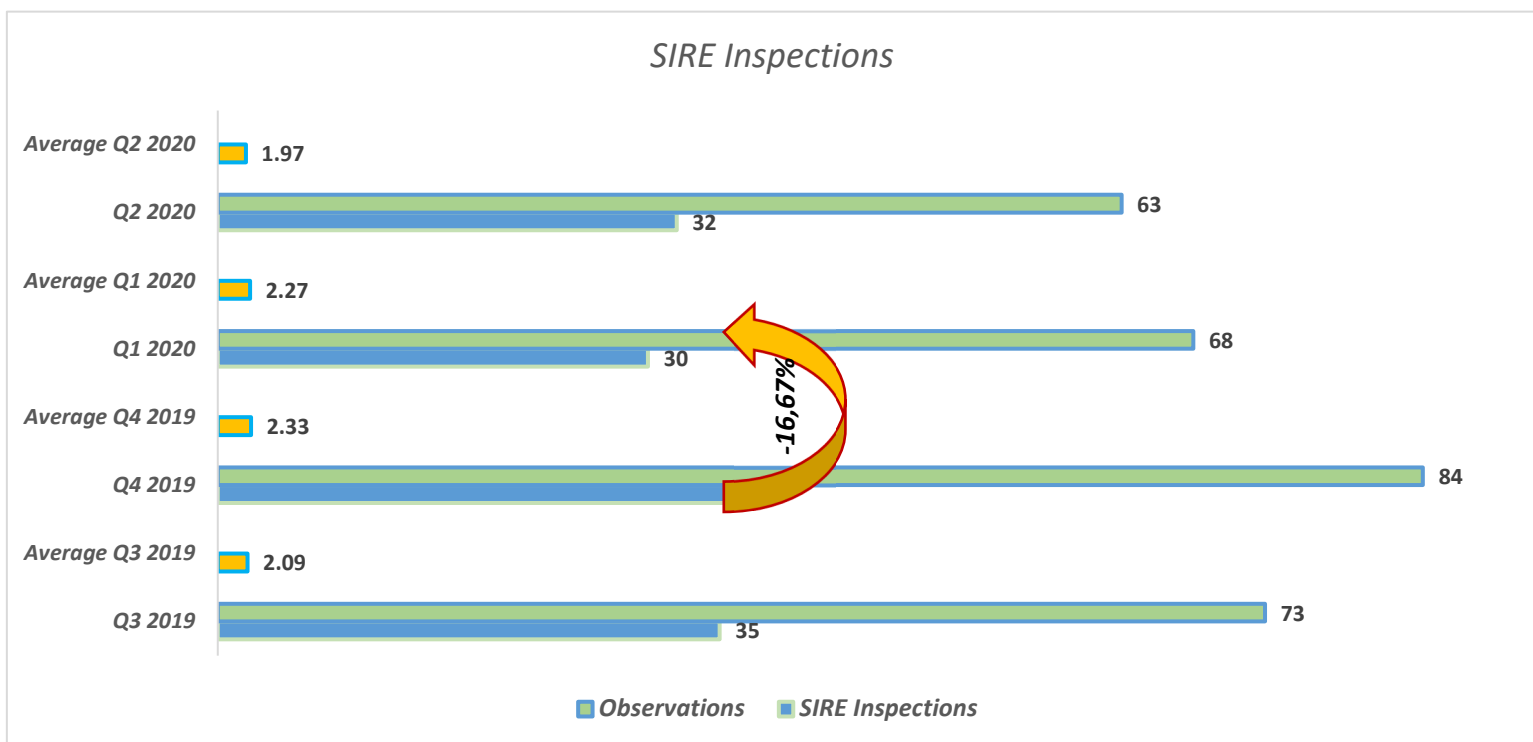


Figure 5-SIRE Inspections



- a) For Q3 of 2019 the Vetting Inspections were 73 and the Observations were 35.
So, the average number of observations per inspection for Q3 - 2019 is **2,09**.
- b) For Q4 of 2019 the Vetting Inspections were 84 and the Observations 36. So, the average number of observations per inspection for Q4 - 2019 is **2,33**.
- c) For Q1 of 2020 the Vetting Inspections were 68 and the Observations were 30.
So, the average number of observations per inspection for Q1 - 2020 is **2,27**.
- d) For Q2 of 2020 the Vetting Inspections were 63 and the Observations were 32.
So, the average number of observations per inspection for Q2 - 2020 is **1,97**.

There is a significant decrease, namely a percentage as high as 16,67 percent, on the number of vetting inspections during the period of January, February and March of 2020, as the restrictions due to COVID-19 remained severe. During that period, WHO and all countries, in general, applied very strict measures due to the excess mortality and transmission of the virus. Company’s KPIs “Average number of observations per SIRE inspection” requires less than 3 observations per vessel per year. For Q2 2020, an average of 1.97 observations were issued per SIRE inspection. 63 observations were issued in a total of 32 SIRE inspections.

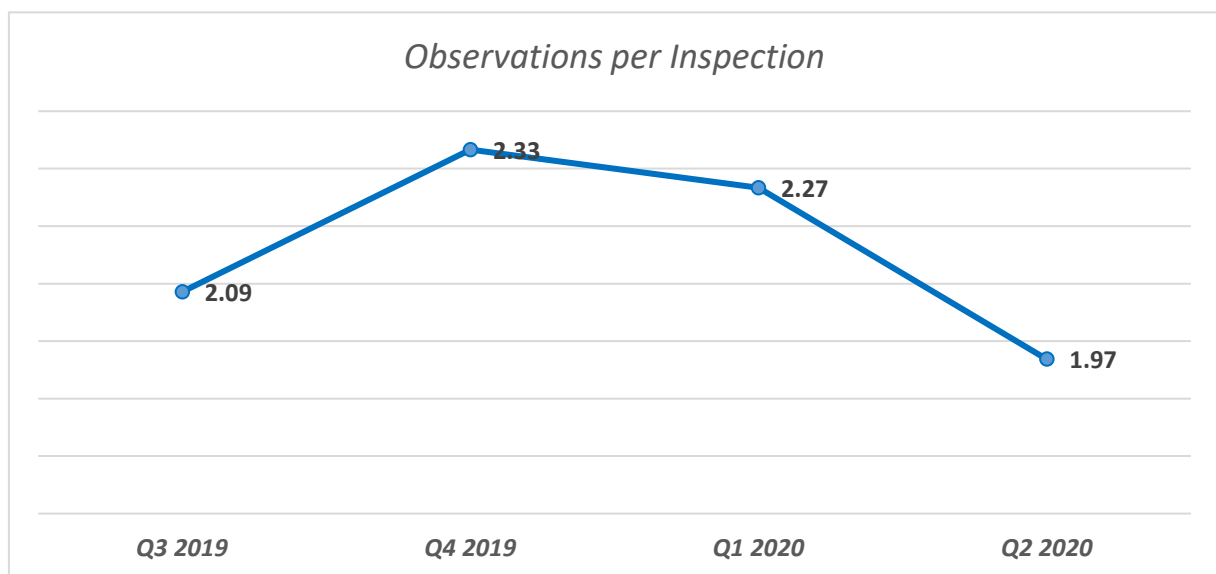


Figure 6-Observations per Inspection

It is noted that there has been a decrease in the average number of issued observations per SIRE inspection in comparison to the last 3 quarters. The average number of observations reflects ABC’s position between industry leaders. Further efforts are constantly being set forth, to further lower the number of observations per SIRE inspection and improve ABC’s vetting performance.



Observations per Inspection per VIQ Chapter

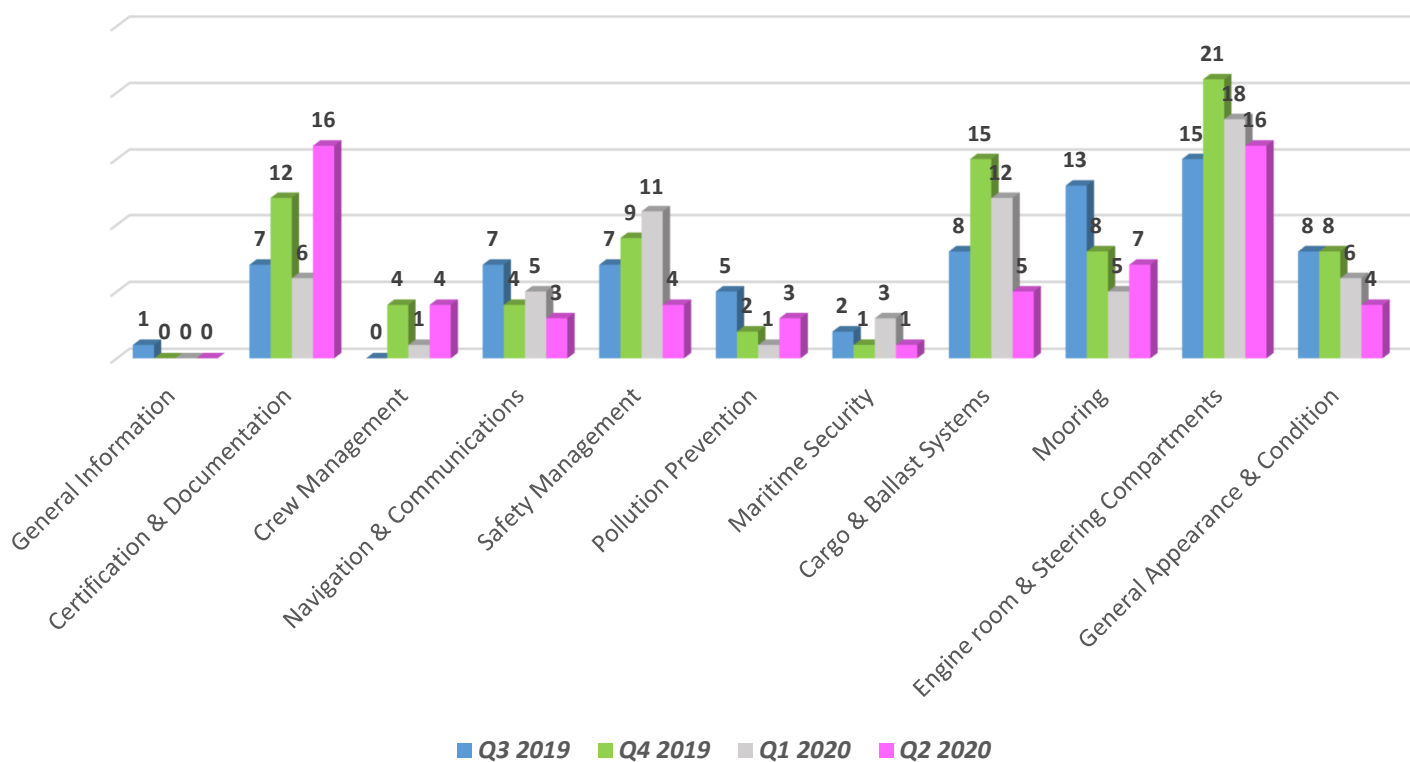


Figure 7-Observations per Inspection per VIQ Chapter

As we noticed from the above graph, the observations per inspection ratio was improved at most of the chapters for the Q2 2020 except Certification and Documentation, Crew Management, Pollution Prevention and Mooring.

Actually, observations on Chapter No. 2 – Certification & Documentation and Chapter No 3 – Crew Management were more or less expected, due to the Corona Virus and the difficulties and delays occurred on crew changes. The crew changes were not permitted and still aren't at many of ports worldwide, resulting in the raise of observations related with crew licenses and contract expiration. The best performing chapters in comparison with 2019 are Pollution Prevention, Mooring, General Appearance & Condition, Navigation & Communications and Cargo & Ballast Systems. Chapter 4 – Navigation & Communications and Chapter 6 – Pollution Prevention are both of high importance and in many cases observations on those chapters might be considered as High Risk.



*Observations per Inspection per VIQ Chapter
2017-6m2020*

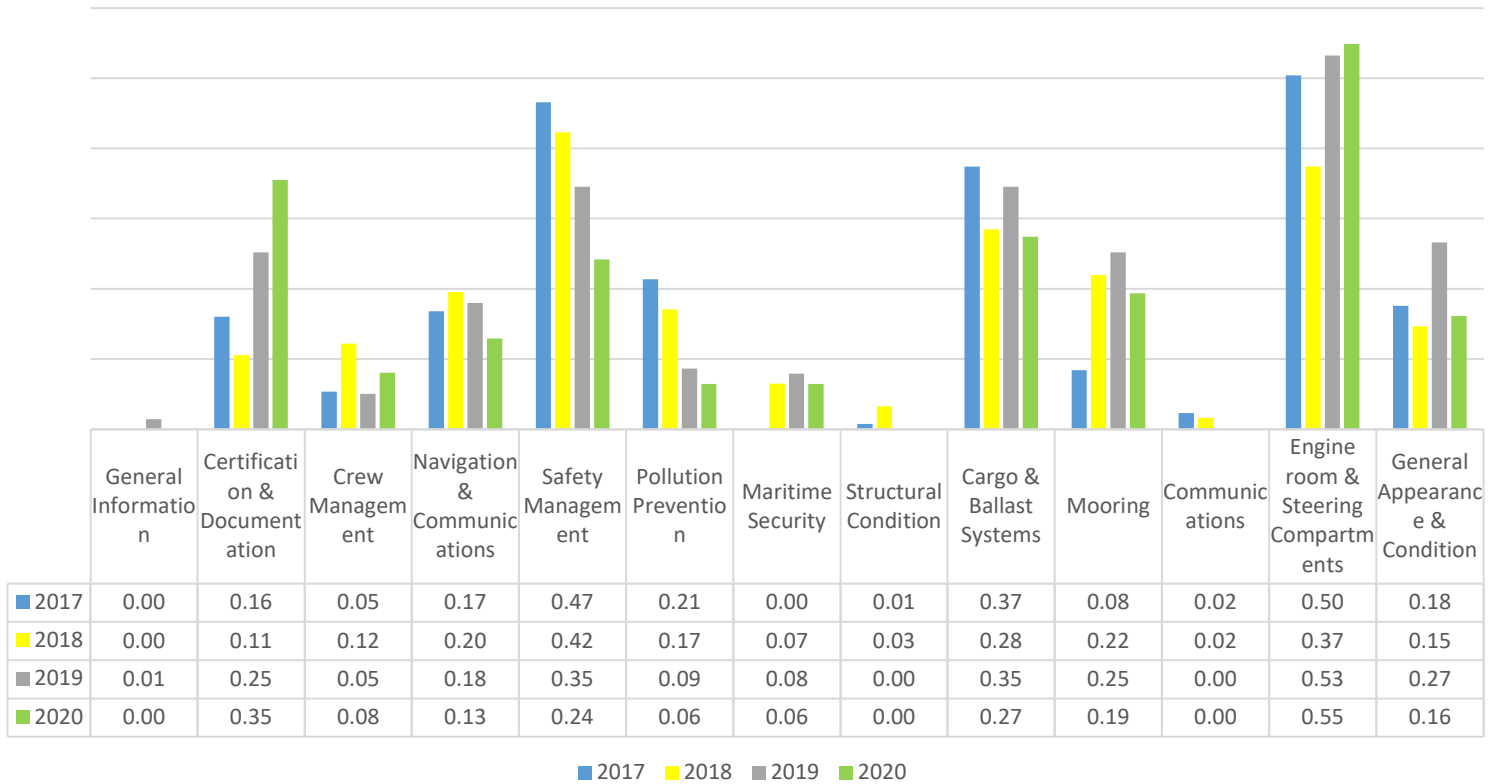


Figure 8-Observations per Inspection per VIQ Chapters (last 3 years-rolling basis)

According to the above graph, the majority of VIQ chapters, the Fleet Performance has been improved in 2020.

- a) A minor increase is noted on Chapter 2 – Certification & Documentation, from 0,25 to 0,35, on Chapter 3 – Crew Management, from 0,05 to 0,08 and a slight increase on Chapter 10 – Engine & Steering Compartments, from 0,53 to 0,55.
- b) The performance under the rest of the VIQ Chapters has been improved in an average of 14%.
- c) The following Chapters are in the lowest level since 2017:
 - i. Safety Management is 0,24 from 0,47
 - ii. Cargo & Ballast Systems is 0,27 from 0,37
 - iii. Pollution Prevention is 0,06 from 0,21
- d) The following Chapters were improved significantly:
 - i. Safety Management from 0,35 to 0,24,
 - ii. Cargo & Ballast System from 0,35 to 0,27



iii. Mooring from 0,25 to 0,19

iv. General Appearance & Condition from 0,27 to 0,16.

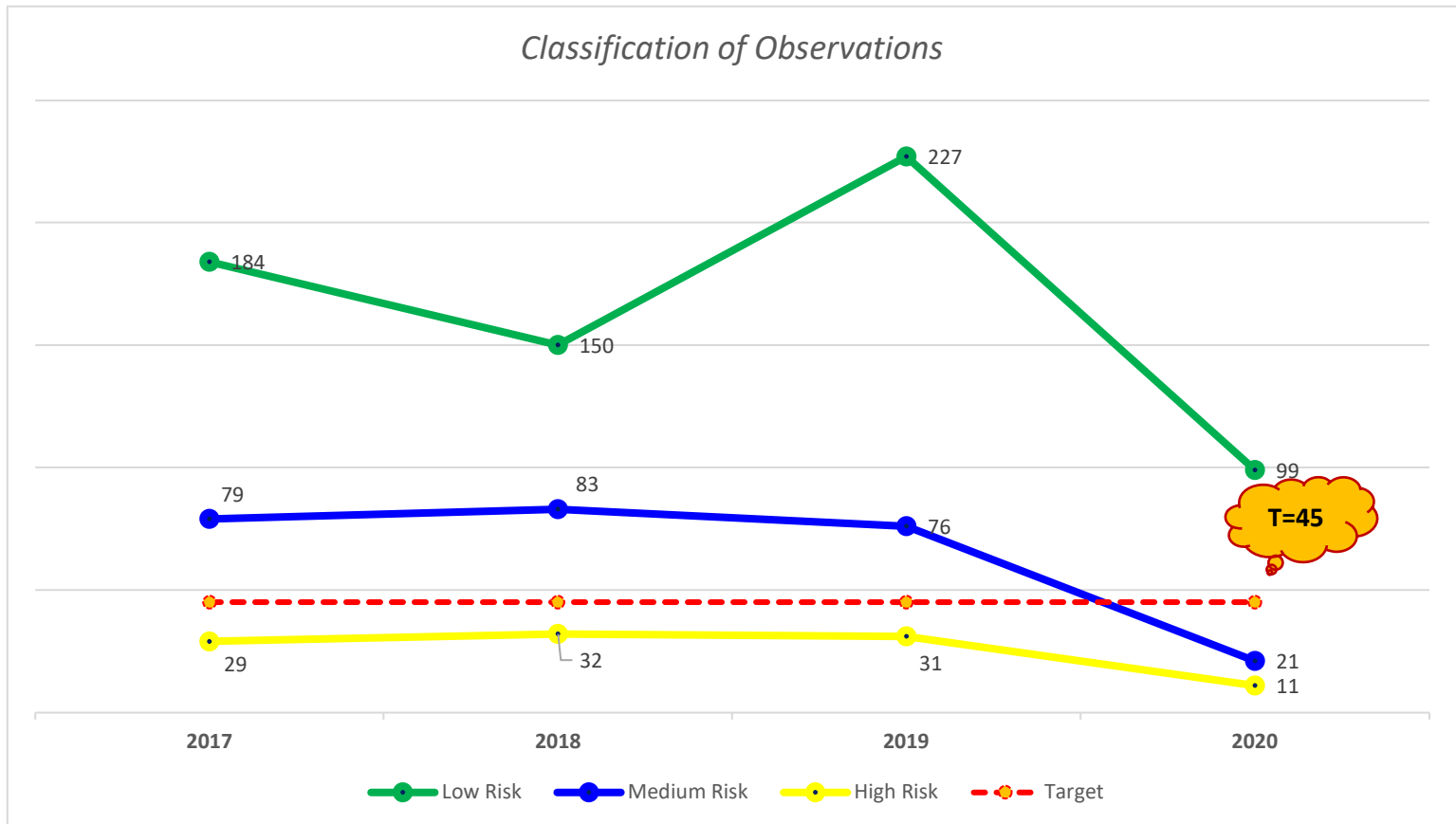


Figure 9-Classification of Observations (last 3 years)

Here we get introduced to another KPI, which is the High Risk Observations per year. Except of the number of observations per Inspection, what really matters in the modern Shipping Industry is the quality or classification of the noted observation. This is measured by the KPIs which refer to the risk of the observation. Even if one and only High Risk Observation is recorded during a SIRE inspection, the vessel will be most probably get negatively assessed by Oil Companies and rejected for the potential employment. Thus, it is a matter of life for the tanker operators to evaluate each one of the recorded observations and then to measure them. Relevant information is forwarded to the entire fleet through Fleet Notices and High Risk Campaigns in order to ensure that all vessels are informed about the “dangerous” observations, their causes and the necessary preventive actions to be taken. The categorization of observations to High Risk Observations started from one of the biggest Oil Companies. It was an effort in order observations relating to the Safety of the Crew, Cargo and Environment to be avoided. Company’s target is less than 45 high risk observations per fleet per year.



Classification of Observations

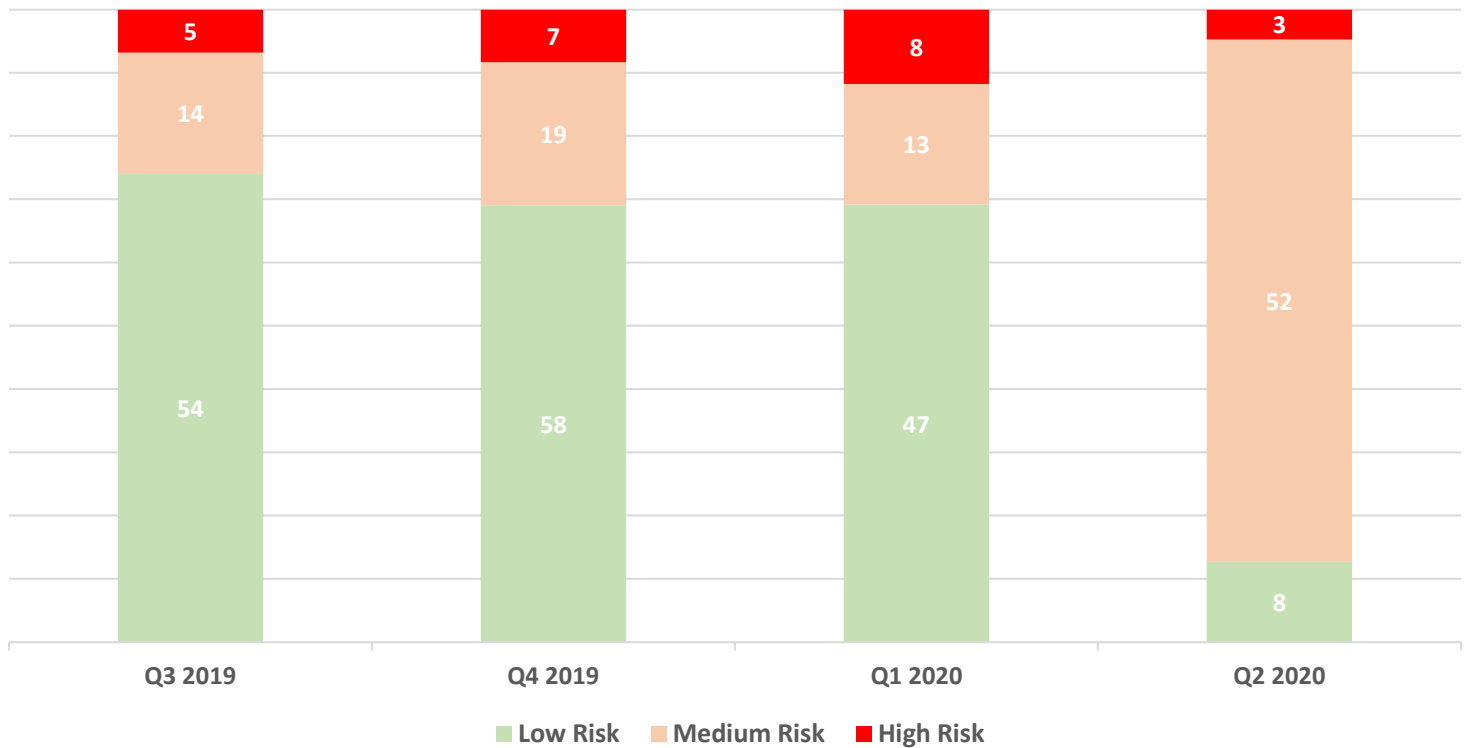


Figure 10-Classification of Observations (last 4 quarters)

For 2020, 11 High risk observations were issued in the ABC's Fleet until March. The observations were analyzed and discussed for the identification of potential trends. It should be noted that the number of high risk observations were reduced from 8 in Q1 2020, to 3 in Q2 2020.



High Risk Observations per VIQ Chapters

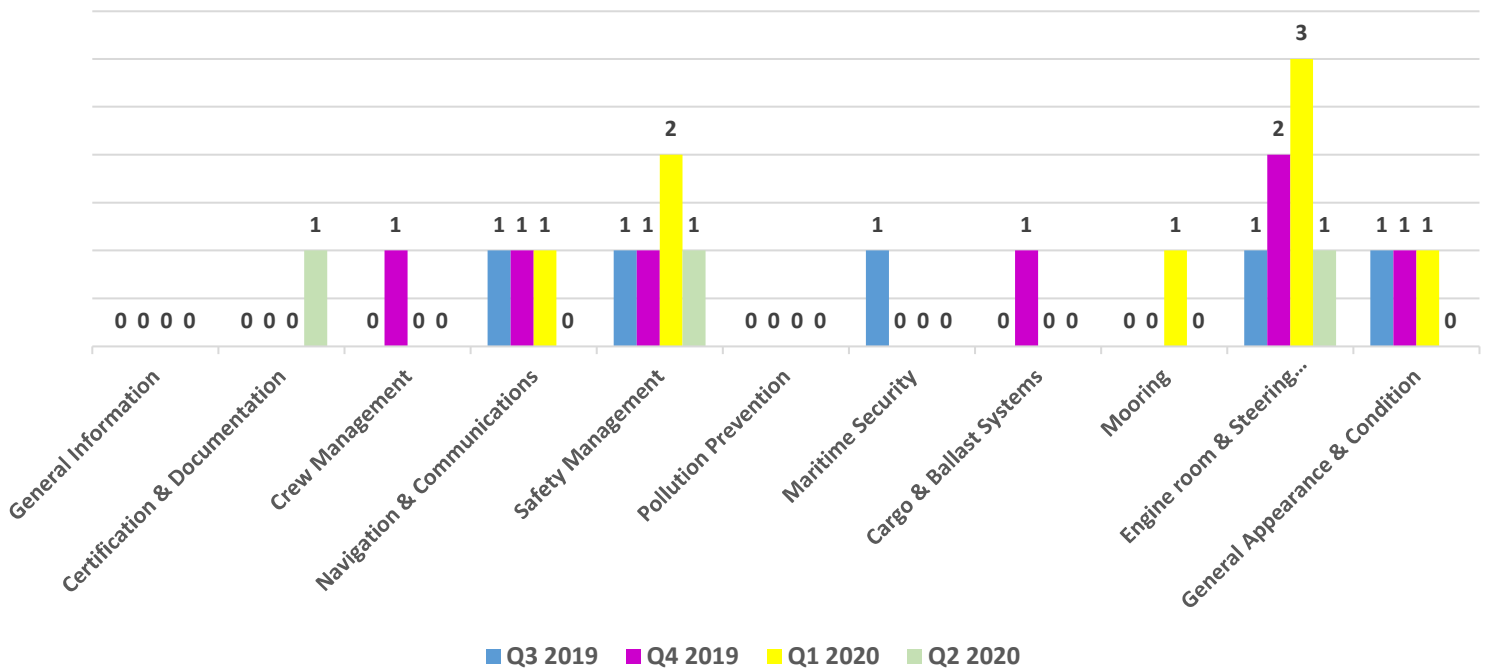


Figure 11-High Risk Observations per VIQ Chapters (last 4 Quarters)

The ABC’s performance on High Risk Observations was improved in Q2 2020. The reordered maximum average assessed risk is 1,25 and 1,75 on Chapters 5 – Safety Management and Chapter 10 - Engine & Steering Compartments respectively.

Q2: Observations per VIQ chapters (Ch.4, 5, 6, 8, 9, 10) vs. performance against 2020 targets

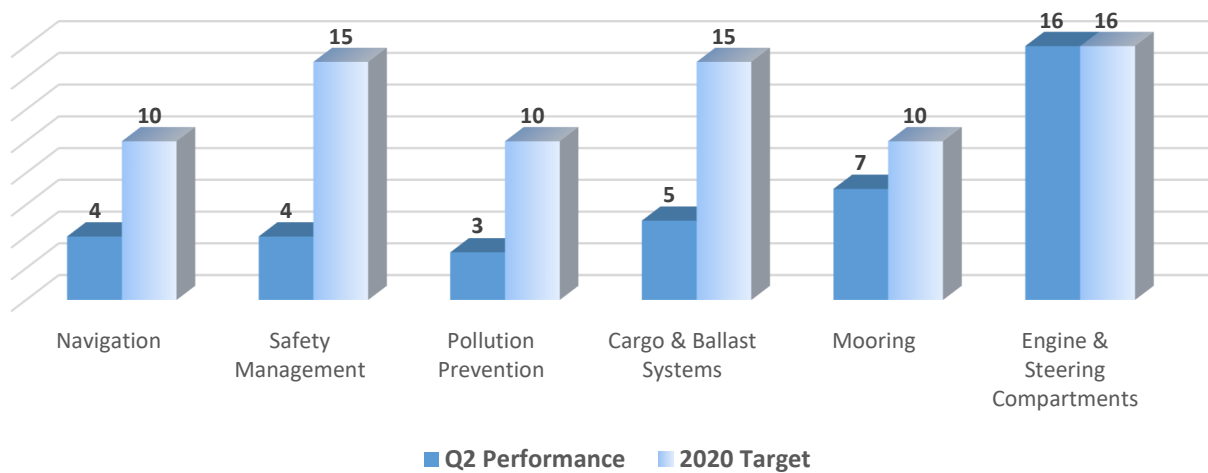


Figure 12-Q2: Observations per VIQ chapters (Ch.4, 5, 6, 8, 9, 10) vs. performance against 2020 targets



ABC has set one more target. The number of observations on the VIQ chapters 4, 5, 6, 8, 9 and 10 to be less than each chapter's target. For:

- a) Chapter 4 – Navigation & Communication, the target is 10 observations per quarter (40 observations per year).
- b) Chapter 5 – Safety Management, the target is 15 observations per quarter (60 observations per year).
- c) Chapter 6 – Pollution Prevention, the target is 10 observations per quarter (40 observations per year).
- d) Chapter 8 – Cargo & Ballast Systems, the target is 15 observations per quarter (60 observations per year).
- e) Chapter 9 – Mooring, the target is 10 observations per quarter (40 observations per year).
- f) Chapter 10 – Engine & Steering Compartments, the target is 16 observations per quarter (65 observations per year).

It should be noted that only one (1) High Risk and three (3) minor observations were issued in the entire ABC fleet related to Safety Management and three (3) minor ones on Pollution Prevention. This reflects Company's principal focus on maintaining and enhancing its "Safety Culture" and promoting "Green & sustainable" shipping practices. ABC has developed an extensive and detailed Sustainability plan to ensure all ABC activities are environmentally friendly and encouraging an era of 'Green Shipping'.

It is observed that the highest number of observations are related to Engine & Steering Compartments. In response to noted observations, the MRM members decided the following actions in Q1 2020, which are in progress:

- a) A technical workshop related to the identified observations to be developed.
- b) Outstanding Management System platform report, including Engine & Steering compartment observations to be discussed in briefing Senior Engine Officers, prior joining a fleet vessel, to avoid re occurrence.
- c) ABC superintendents, to continue to verify implementation of corrective / preventive actions of VIQ Chapter 10 during their attendances on board.

In addition to the above actions, the MRM members decided that remote attendance verification procedures need to be developed, in light of the COVID19 restrictions and reduced superintendent attendances. In Q3 2020, a remote attendance procedure will



be developed as to also ensure the verification and implementation of corrective / preventive actions of VIQ Chapter 10.

Now we will see the performance of those Chapters during 2019. We have to add and as we can see from the graph below, in 2019 ABC's targets were different.

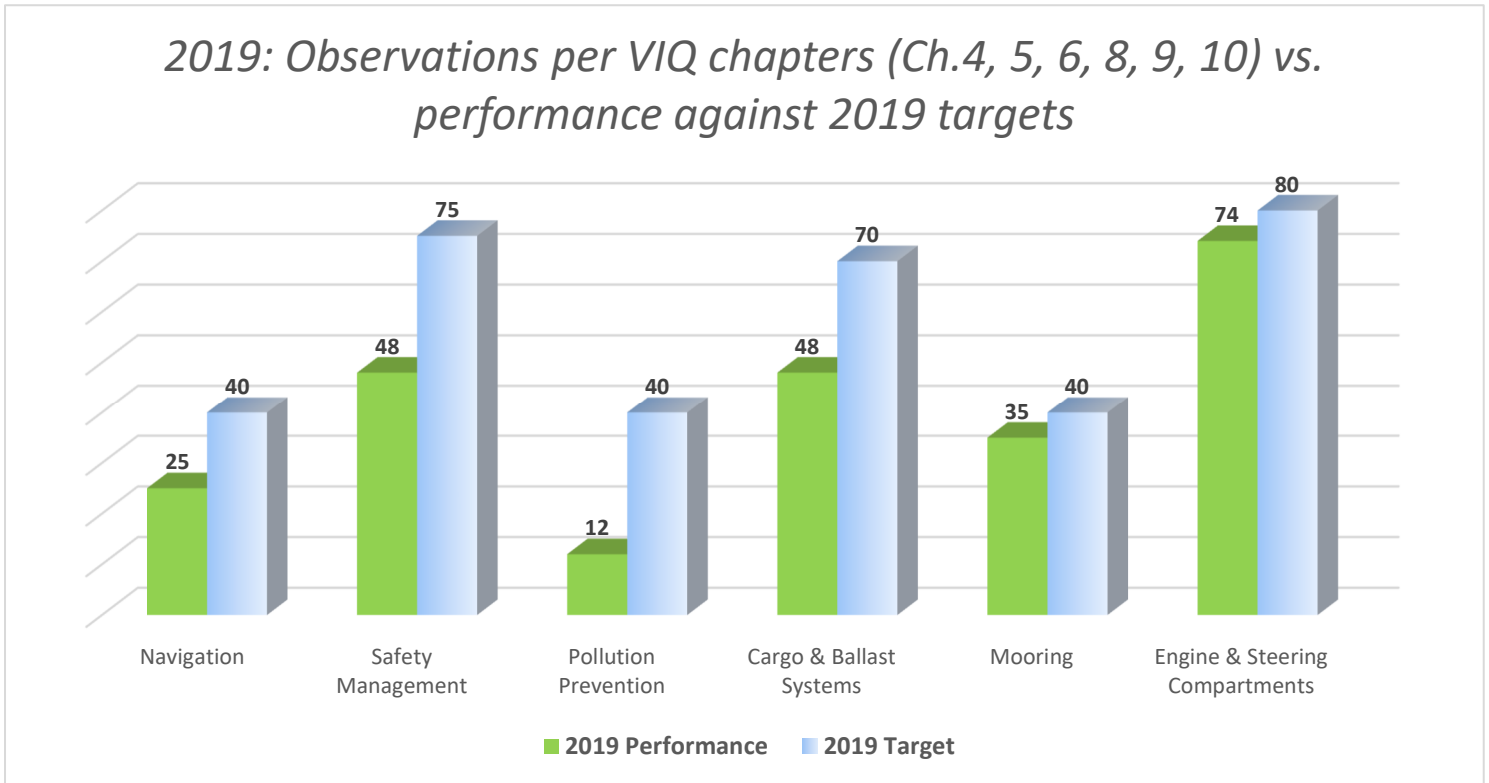


Figure 13-2019: Observations per VIQ chapters (Ch.4, 5, 6, 8, 9, 10) vs. performance against 2019 targets

ABC achieved all its targets regarding those six selected chapters for 2019. We notice excellent performance on Chapter 4 – Navigation & Communications and Chapter 6 – Pollution Prevention, where the actual performance was 37,50% and 70% respectively better than its 2019 targets. Company's overall performance is about 33% more satisfactory against the set 2019 targets.



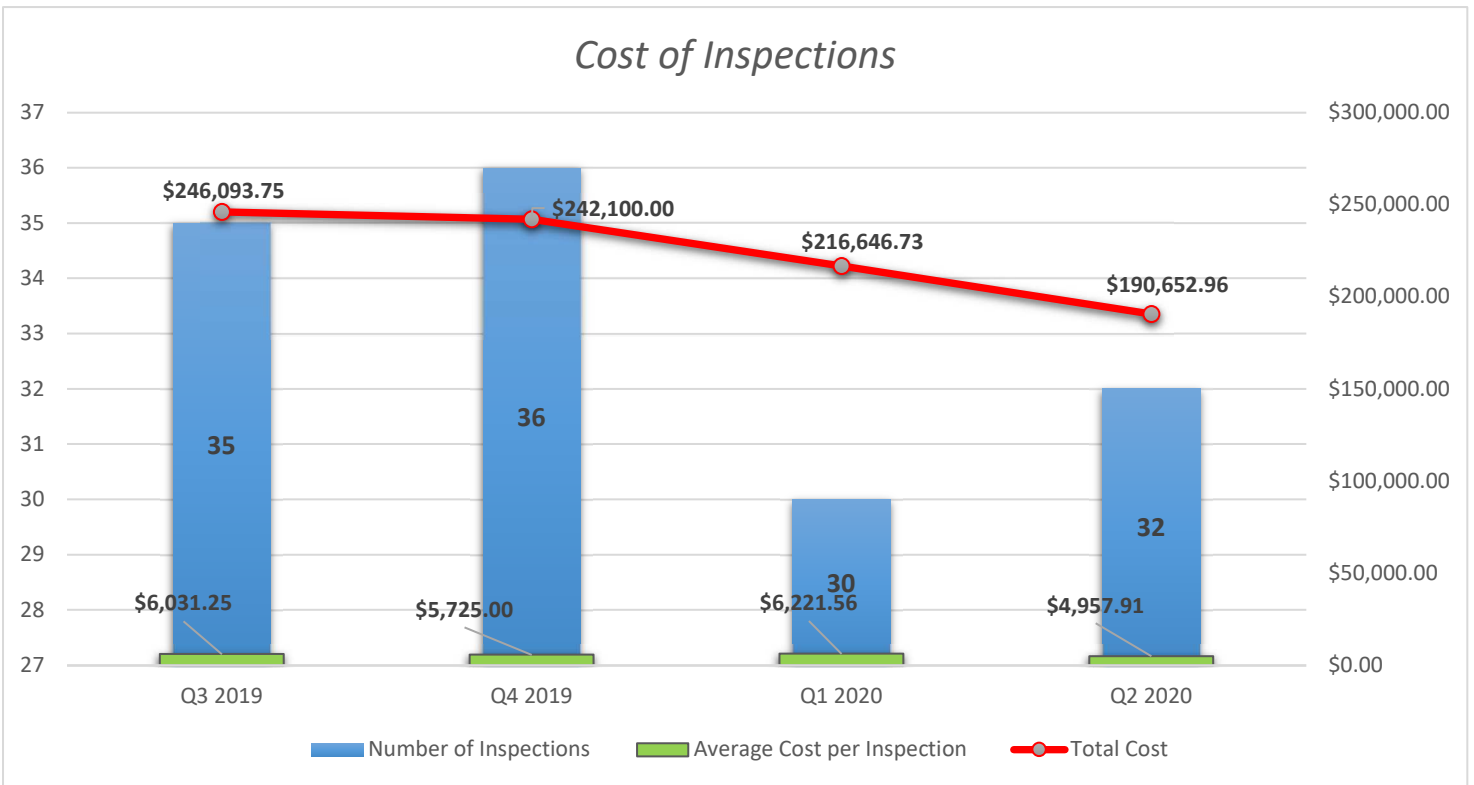


Figure 14-Cost of Inspections

The total cost of inspections has been significantly decreased during Q2 2020 in line with the decreased number of inspections because of COVID-19 restrictions. Despite the fluctuations we notice in total cost, the average cost of inspections is very close to the previous levels. This is evidence that the cost of inspections applied by the oil companies remains on the same levels. The cost of inspections is being monitored with the view of eliminating the additional charges and arrange the inspection in the most effective manner. Extra charges that may be occurred during a SIRE inspection are overnight charges, hotel accommodation, transportation and provisions of the inspectors. Measuring the cost of inspections is of essential interest, for which all tanker Operators care about. Certainly, Companies should ensure that the highest standards of safety are kept on board their vessels, offering to its fleet a valuable commercial status; however, bearing in mind that this should be achieved only through the most cost effective way.



INSPECTIONS WITHOUT OBSERVATIONS

Inspections w/o Observations Total Inspections

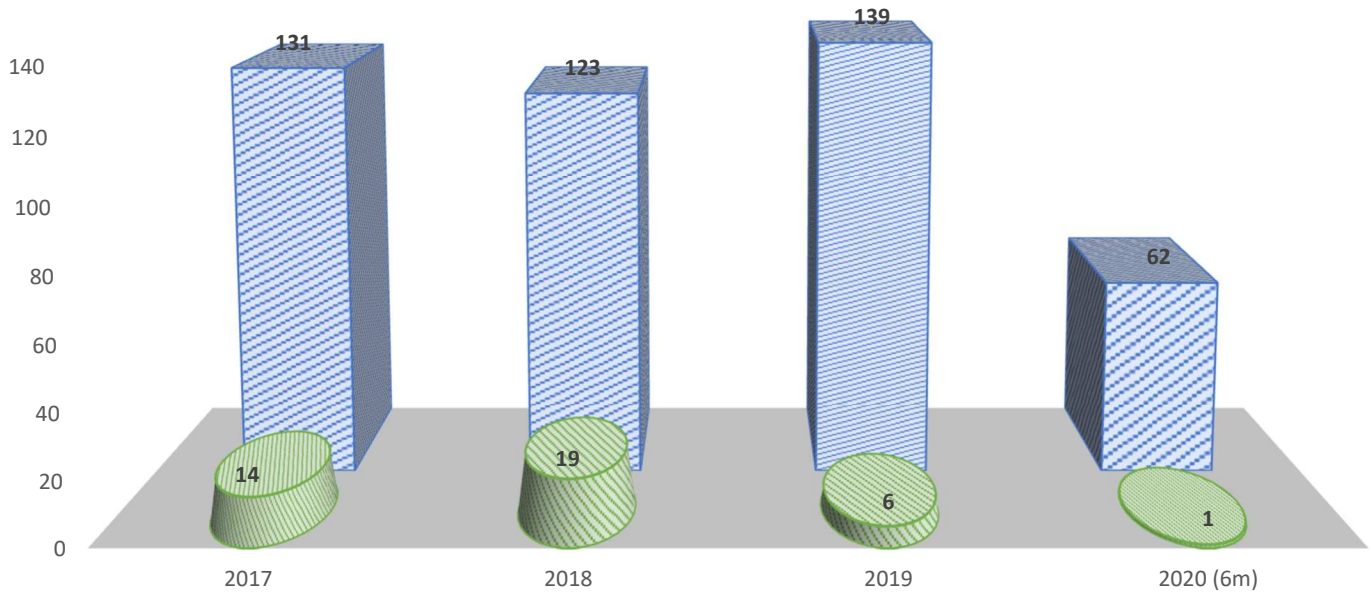


Figure 15-Inspections without Observations

ABC's target is also more than seven (7) inspections per fleet per year. We notice a decrease on inspections without observations both in 2019 and in 2020. This reduction is due to the change of the Vessel Inspection Questionnaire in February of 2019, as inspectors became stricter than they were and personnel on board need time to assimilate and adapt themselves with the new items and requirements.



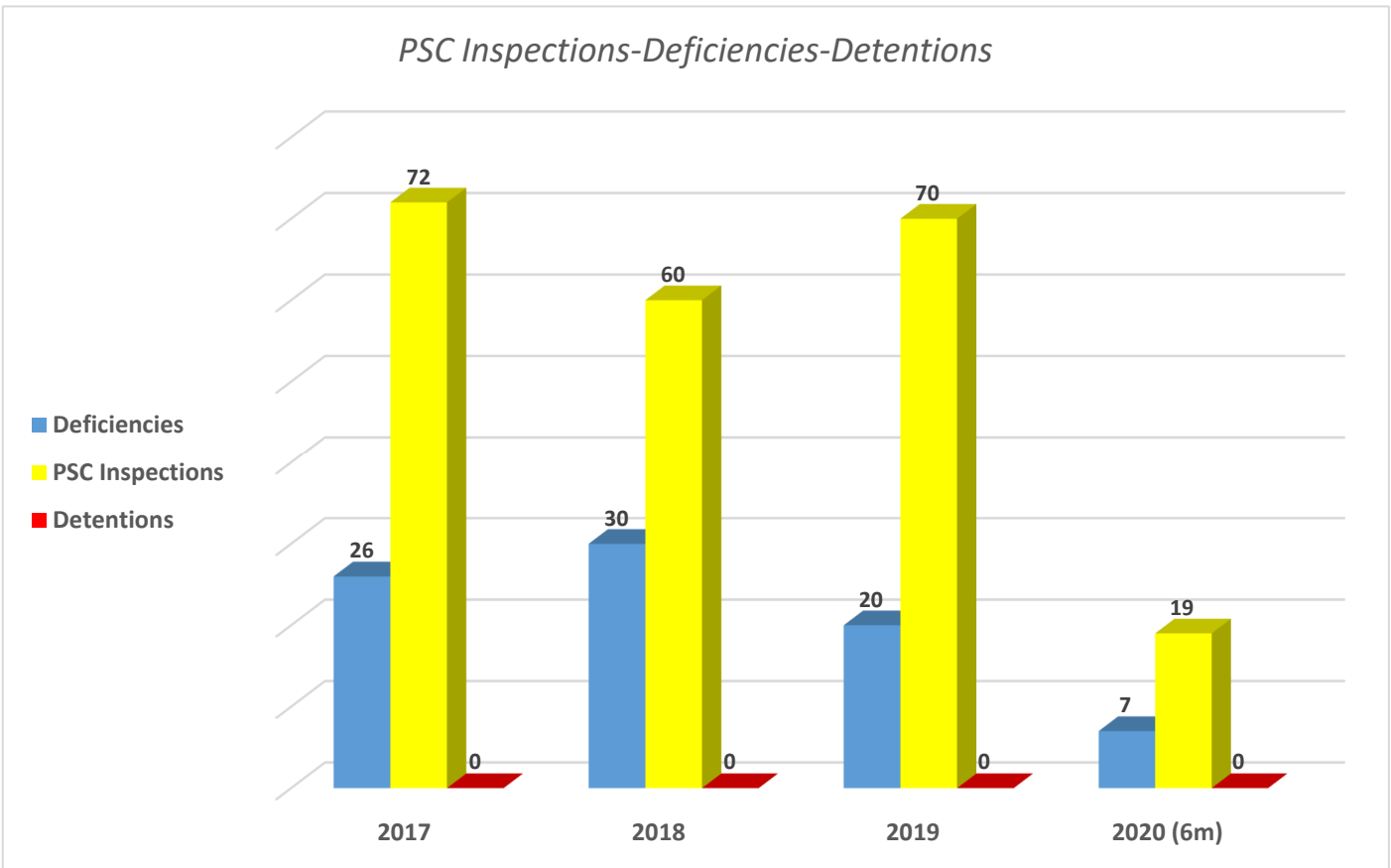


Figure 16-PSC Data (last 3 years-rolling basis)

ABC’s target is zero deficiencies per year. From the above data chart, we observe that Case Company has been achieving its target since 2017 with great success. Moreover, ABC has set one more target regarding Port State Control Inspections. This target is to reduce the number of PSC Deficiencies per inspection to less than 80. For Q2 2020, 7 PSC Inspections were carried out and 0 PSC deficiencies were issued. A notable achievement for the ABC fleet, where ship’s crew and Masters performed outstandingly in presenting company’s Safety Management System (SMS) and practices.

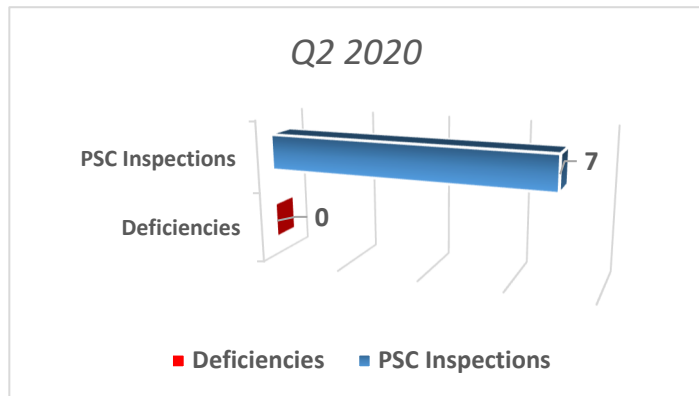


Figure 17-PSC Data (Q2 2020)



SIRE Inspections vs Company's Inspection

The graph below is a comparison of Vetting inspectors' findings and Company's Superintendents findings, based on Vessel Inspection Questionnaire (VIQ7). As presented below, despite the reduction of company attendances due to COVID-19 restrictions, on average company Superintendents findings exceed Vetting Inspectors' findings in several VIQ chapters, such as 'Safety Management', 'Cargo and Ballast Systems', 'Mooring' & 'General Appearance and Condition' Company attendances are expected to resume following positive COVID19 developments. Company's Superintendent's efforts focus on the strict implementation of established company procedures and SMS, as to enhance and develop a solidified proactive culture onboard. By reviewing regularly submitted SMS forms, Planned Maintenance System (PMS), the outcome of remote audits (ISM and ISPS Audits) etc., ABC shore personnel responsible for fleet vessels, managed to point out weak areas and take immediate actions. As a result, fleet standards have been maintained, as demonstrated in the graph below. Remote Engineering & Cargo Audits and remote independent firm attendances will be arranged in Q3 to ensure the proper monitoring of fleet vessels.

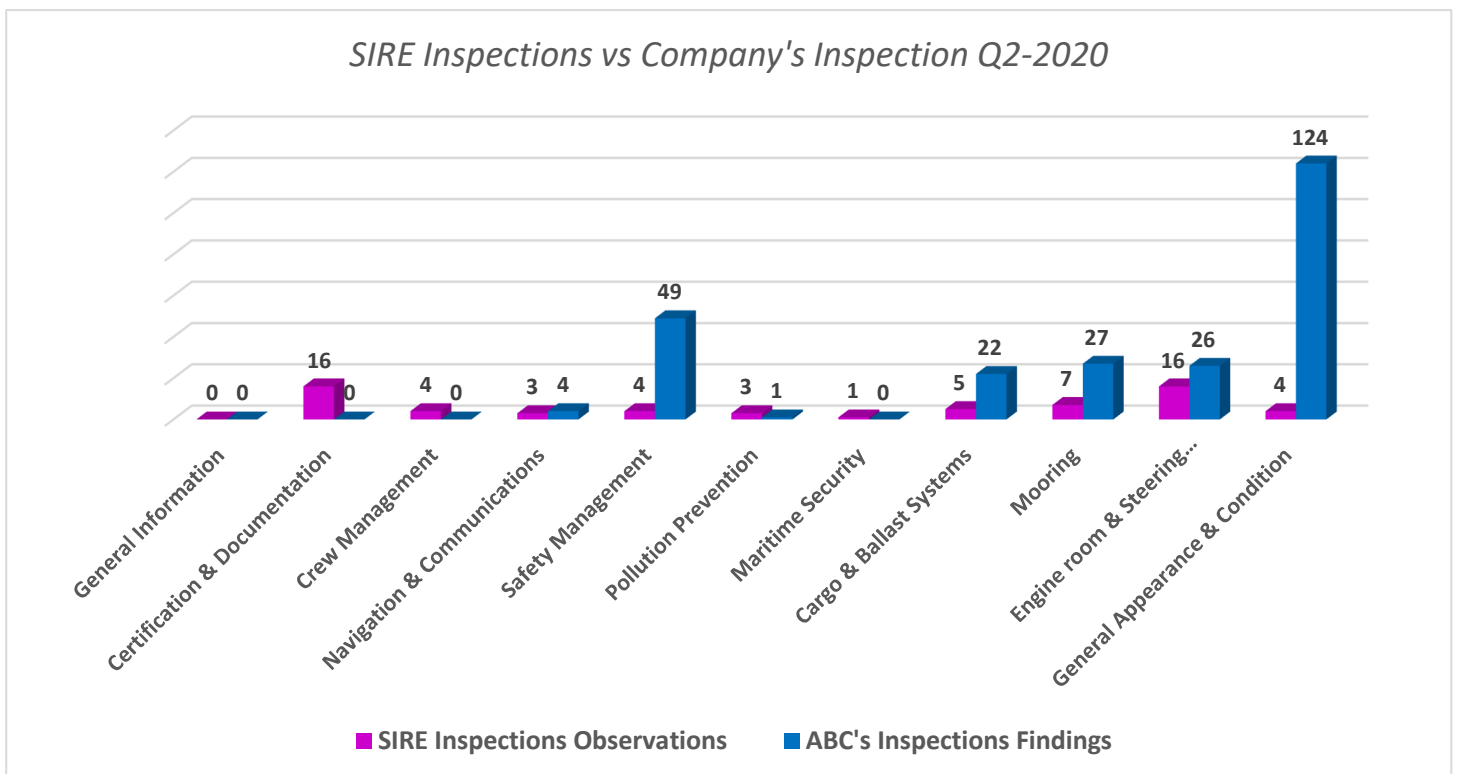


Figure 18-SIRE Inspections vs Company's Inspection (Q2-2020)



Health, Safety, Quality and Environment – KPIs

Why it matters

- Safety is a core value of the ABC. Continuous improvement of company's safety system & performance makes us more efficient.
- Establishment of Health & Safety Culture and workplace is a company's priority.

What we value

- Cause no accidents, no harm to people and no damage to the environment.

ABC's approach

- Company focuses on process safety, personal safety, health and wellbeing, and security.
- ABC understands that even the best processes can have weaknesses that may lead to accidents, so its people take steps to design these out.
- ABC focuses on preventing incidents-reacting effectively if they happen.
- ABC learns from every incident.
- Its people understand how and why unsafe act occur as it is an essential step for error management.

Performance

- ABC tracks its safety performance using industry standard metrics and work continuously to improve all aspects of the company's performance, meet its targets, and achieve all goals.

ABC strives to help improve safety performance throughout the Shipping Industry by sharing safety experience and standards with other operators, contractors and professional organizations. The Top Management provides all the necessary Resources to meet its goal for continuous improvement and maintain its long and short term strategic plan and achieve HSSE Excellence.

Lost Time Incident Frequency (LTIF)

The ratio to be less than 0.36.

The target met. The ration calculated as 0.28.



LTIFR Calculation

$$\frac{(\text{Number of lost time injuries} \times 1,000,000)}{\text{Employee total hours worked}}$$

Picture 4-LTIF Equation



Total Recordable Case Frequency (TRCF)

The ratio to be less than 0.88.

The target met. The ratio was calculated as 0.28.

$$TRCF = \frac{(Fatal + LTI + RWC + MT) * 1\,000\,000}{working\ hours\ (all)}$$

Picture 5-TRCF Equation

The purpose of the following Performance Indicators (PIs) is to monitor any personal injury, fatality, lost time sickness cases or even repatriations due to health issues.

Analysis

ABC implements actions for the continuous improvement of LTIF:

- Enhance Near miss / unsafe act / condition reporting
- Promote wellbeing on board and provide training for weak signals and identification of behavioral changes
- Alert shipboard personnel
- Encourage preventive safety actions and promote safety culture
- Identify common mistakes & areas of behaviors that need improvement
- Understand that people make mistakes and establish a system to manage consequences
- Train shore personnel to lead by example during their attendances

PI 1: Lost Time Injuries

Zero.

PI 2: Lost Workday cases (LWC)

Zero.

PI 3: Fatalities due to sickness

Zero.

PI 4: Fatalities due to work injuries

Zero.

PI 5: Lost Time Sickness cases (LTS)

One (1) Lost Time Sickness Case observed during Q2 2020.



PI 5A: Repatriation due to Health Issues

One (1) repatriation occurred due to health issues.

PI 6: Total Recordable Cases (LTIs + RWCs + MTCs)

Zero.

PI 7: Total Exposure Hours (ABC)

The total exposure hours recorded during Q2 2020 is 2424180

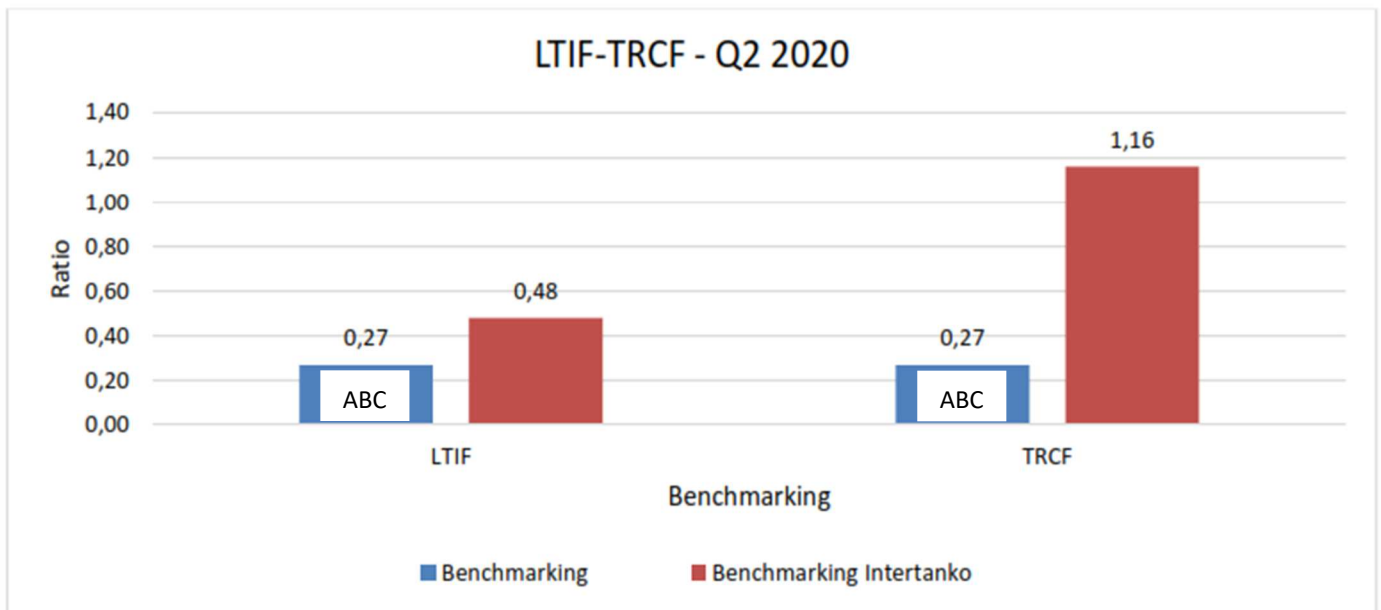


Figure 19-LTIF-TRCF (Q2 2020)

ABC has set as target to maintain the TRCF and LTIF rates, lower than the INTERTANKO's average figures. The target has been met for Q2 2020.

HSQ KPI 1: Average Number of Near Misses

Target: The target is 3 near misses per vessel per month. Target met.

HSQ KPI 2: Average Number of Near Misses created by Engine Personnel

The target is 1 near misses per vessel per month submitted by Engine Personnel. Target met.

HSQ KPI 3: Average Number of Near Misses created by Ratings

The target is 1 near misses per vessel per month submitted by Ratings. Target met.

HSQ KPI 4: Number of Near Misses issued by (HSQE, Technical, Operations) /

Company's Superintendents during onboard attendances will focus on near miss issuance during their attendance onboard when same are permitted due to COVID-19 restrictions. Separate meeting will take place with company's superintendents to clarify



the importance of leading by example and encourage seafarers to find and report Near Misses during their service onboard.

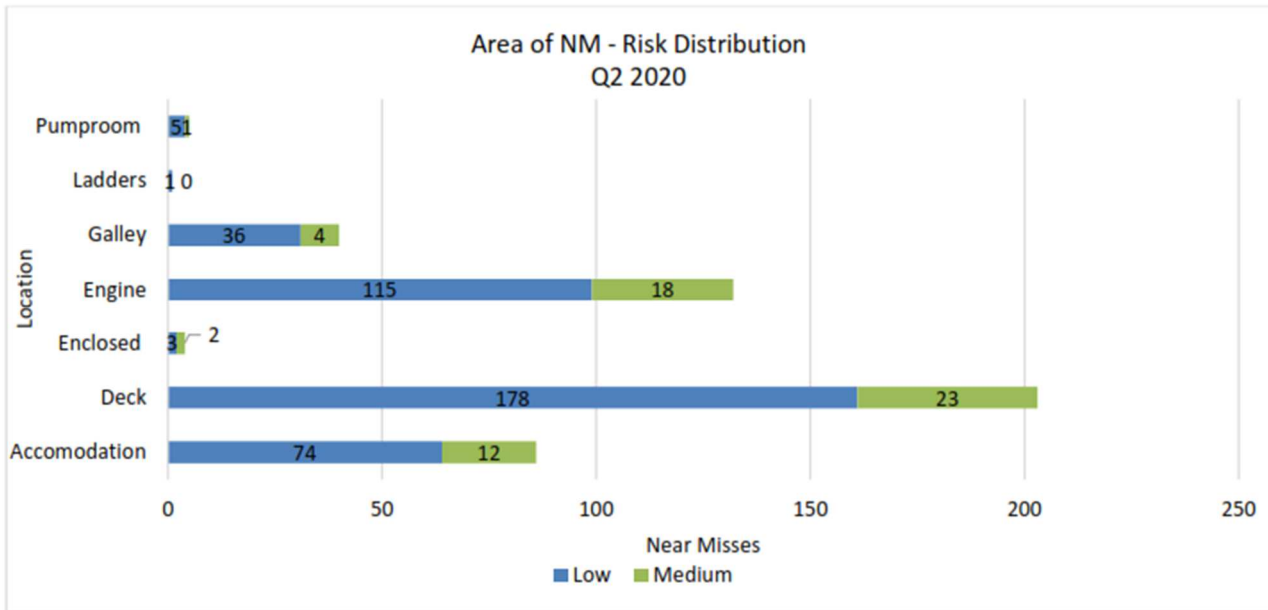


Figure 20-Area of Near Misses - Risk Distribution (Q2 2020)

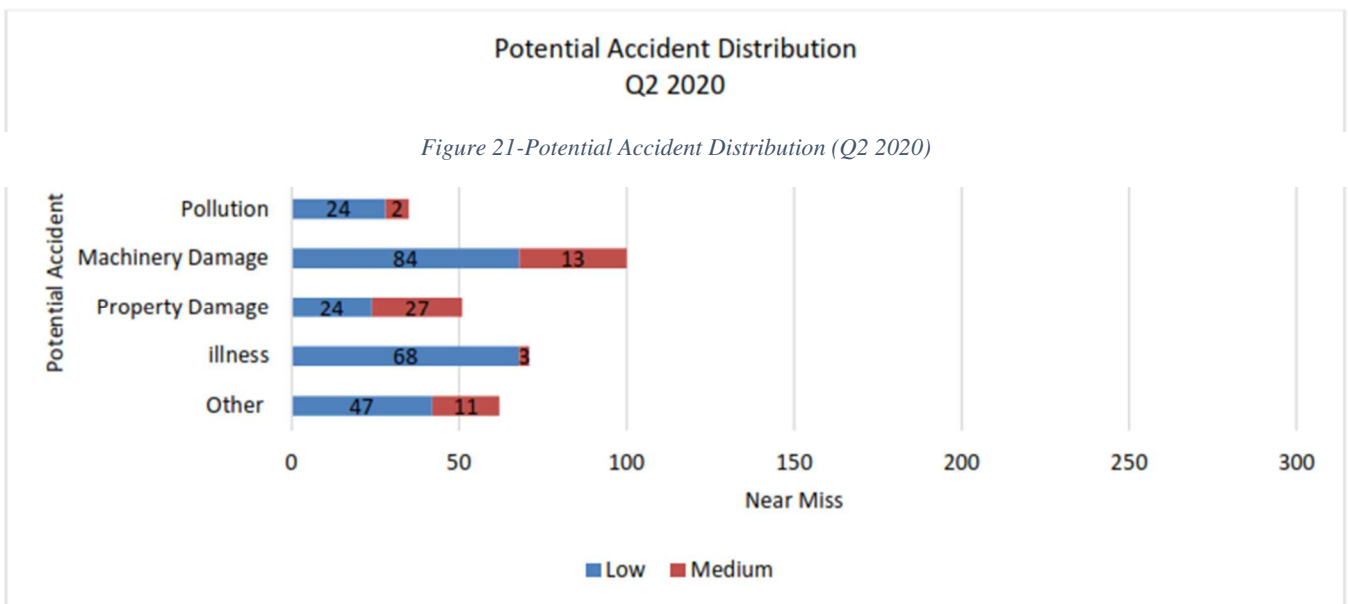


Figure 21-Potential Accident Distribution (Q2 2020)

The majority of reported Near Misses have been identified on deck.

More than half of the Near Misses would have resulted in personnel injuries. The source, corrective and preventive actions are discussed in monthly Safety Committee Meetings to ensure that causes are removed and barriers for avoiding personnel injuries



are in place. ABC focuses on the identification of hazards, behaviors, actions, omissions to avoid Near miss reoccurrence.

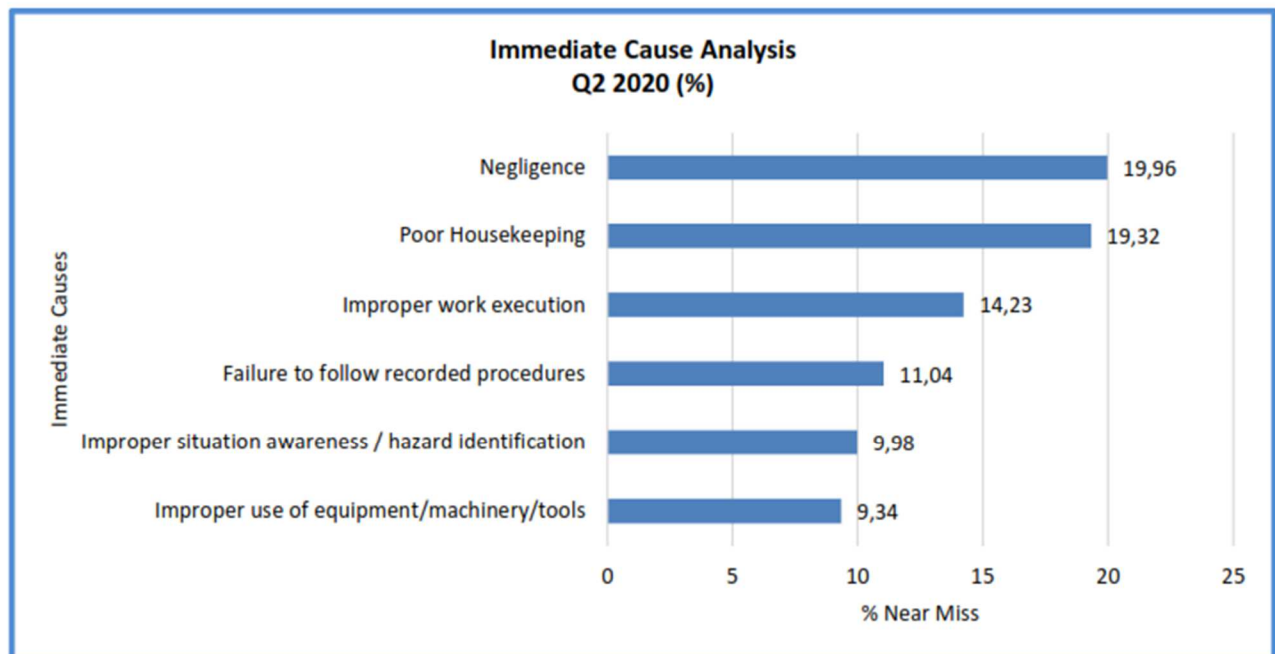


Figure 22-Immediate Cause Analysis (%) - (Q2 2020)

The major causes of Near Misses are Negligence or omissions and Poor housekeeping.

Actions Taken

Housekeeping

- Crew members should be more vigilant with respect to proper housekeeping, safety measures and proper placement / securing of equipment.
- A message to raise awareness of the importance of proper housekeeping will be sent to fleet to minimize the reoccurrence of similar findings.
- Safety Ideas from vessels will be received during the year focusing on the improvement of housekeeping.
- Refresher trainings on Unsafe Acts / Conditions, Near Miss will be provided and further examples to be given via the Safety Officer seminar to meet training needs.

Negligence (Behavioral Factor)

- Update the agenda of the soft skills seminar (performed by specialists) for all the crew members onboard.
- Update the structure of leadership courses for the seafarers.



- Constant motivation of Senior Officers during pre-briefing and mini forums.
- Maintain high crew selection criteria standards in the fleet.
- Revised the Crew Evaluation criteria and form.
- Training structure to take into consideration the importance of Risk Assessment, Hazard identification and Near miss reporting.



Conclusions

Launched in 1993, the OCIMF Ship Inspection Report Programme (SIRE) has governed over 180,000 inspection reports. As a result, SIRE has made a significant contribution on improving the overall safety record of the maritime industry. Both OCIMF tools we have talked about in this thesis, namely SIRE and TMSA, have contributed equally to this improvement of Safety.

The vetting criteria varies amongst the Oil Majors and Companies. Moreover, the vetting requirements differ due to the Terminals involved in the business, but typically, in order a Vessel and a Vessel Operator to be considered acceptable to an Oil Company, the following requirements must be met:

- A. There must be a fresh SIRE report proving minor defects and deficiencies of the tanker vessel in question and her on-board systems and maintenance. Excessive number of recorded observations or even a single High Risk observation may lead to the vessel's rejection and subjects' failure.
- B. Companies' Fleet Vessels must have a good safety overall performance record. By carrying out TMSA verification audits, compliance is ensured.
- C. The 'Officers matrix' and shore-based management systems must be as appropriate, and
- D. The Operator must comply with the Oil Majors' specific requirements.

As maritime accidents involving Oil Tankers can have serious consequences, evaluation of the potential risks is necessity to minimise liability. Therefore, the vetting process has become an obligated step for chartering to reject and eliminate substandard oil tankers.

The shipping industry is a relative safe industry and incident rates of total loss and death is not very high. Despite the fact that the risk is low, the high economic costs associated with an incident should underline the importance of improving the effectiveness of inspections to prevent such incidents or accidents.

Most of the tanker industry shares the legislators' objectives of achieving a safer and cleaner world. The industry should be in the business of constantly improving safety and efficiency systems rather than trying to keep one step ahead of the game by finding loopholes and clever tricks around the legislation. It is not the threat of penalty, which should drive the industry to achieve higher standards, but a genuine desire to work as a responsible industry.



TMSA could well prove to be an excellent example of this being put into practice. Allowing a tanker operator to assess their performance and then be audited by their customers, is fundamentally a good system as it helps in making sure that a ship is not a threat under an operator's management. Vivaly, it is not a system, which is based on a vetting inspection that just takes a snapshot in time of the ship. TMSA goes beyond this and takes a look at the most fundamental aspect of running a good vessel – her crew, their training, and continuous improvement practices. Besides the objectives of TMSA are indeed important, such as incident-free operations, improved management systems, best practices transferred across the fleet, feedback and easy access to the charterer on the performance of the operator, no-blame culture, and continuous improvement in standards, to list a few.

To sum up, Vetting is a significant process and adds value to the safety net ensuring that the industry parties employ ships of the highest possible quality. It undertakes no responsibility from other parties, such as Flag or Classification Society inspections. It gives added value also to such parties instead. The truth is that vetting affects the definition of seaworthiness for tankers and there is an increased duty of care placed upon charterers/cargo owners is not negative.



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