

# The familiarization on board of SPV Royal Clipper

*Performed on board SPV Royal Clipper*



Onderzoeksthesis  
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## SUMMARY

The amount of safety related knowledge that the crewmembers of SPV Royal Clipper have, is questioned. More than it should be, crewmembers are unable to answer the basic questions about safety. This is basic knowledge, that should be known from the moment the crewmember have concluded the familiarization training just after embarking the vessel. Knowing this, the training itself has to be the first process to investigate.

To provide an answer on the main question “Is todays familiarization briefing sufficient enough for all crewmembers on board of SPV Royal Clipper?” this study investigates the familiarization trainings session by means of questionnaires’ performed on crewmembers after completing their training. The first questionnaire is taken immediately after the training. The questionnaire is taken for a second time, two months later. A difference is being found between the three departments on board this cruise ship. The deck department has an overall better knowledge of the safety on board, compared to the engine and hotel departments. The results of the second questionnaire show an overall improvement in knowledge after working two months onboard.

Although the results of the questionnaire give a good insight on the theoretical knowledge of the crewmembers and less in the practical knowledge, based on these results several recommendations could be made. A recurring fact in the recommendations is time for training. More training is needed but who should give it and when should it be done?

For broader perspective in the practical knowledge further research could be performed.

## CONTENT

SUMMARY .....	3
ABBREVIATIONS.....	III
1 PREFACE .....	1
1.1 MAIN AND SUB QUESTIONS .....	1
1.1.1 Main question.....	1
1.1.2 Sub questions.....	1
2 THEORETIC FRAMEWORK.....	2
2.1 SAFETY FAMILIARIZATION TRAINING.....	2
2.2 THE MUSTER LIST .....	5
2.3 FIRE CONTROL PLAN .....	8
2.4 SAFETY BOOKLET .....	10
2.5 AS IS SITUATION .....	11
2.5.1 Scenario .....	11
3 METHOD .....	16
3.1 QUESTIONARY .....	16
3.1.1 Goal.....	16
3.1.2 Target group.....	16
3.1.3 Survey 1.....	17
3.1.4 Survey 2.....	17
3.1.5 Questions .....	17
3.1.6 Set up .....	17
4 RESULTS.....	18
4.1 ANALYSIS FIRST SURVEY .....	18
4.1.1 Hotel department.....	18
4.1.2 Deck department .....	19
4.1.3 Engine department.....	19
4.2 ANALYSIS OF THE SECOND QUESTIONARY .....	20
5 DISCUSSION.....	22
6 RECOMMENDATIONS .....	23
6.1 OBSERVATION OF THE STUDY .....	23
6.2 WORKING POINTS.....	23
6.3 TRAINING / FAMILIARIZATION TRAINING.....	24
6.3.1 Training.....	24

6.3.2	Familiarization training .....	24
6.4	TIME FOR SAFETY .....	25
6.4.1	Safety officer/ superintendent.....	26
6.4.2	Staff captain. ....	27
6.5	MUSTER LIST .....	28
6.6	SAFETY BOOKLET .....	29
6.7	EXAMINATION .....	29
	WORDS OF APPRECIATION .....	30
	BIBLIOGRAPHY .....	31
	APPENDICES.....	32

## ABBREVIATIONS

IMO	International Maritime Organization
SOLAS	Safety of Life at Sea
STCW	Standards of Training, Certification and Watchkeeping
MARPOL	Maritime Pollution
GA	General Alarm
FCP	Fire Control Plan
DPA	Designated Person Ashore
CSO	Company Security Officer
MLC	Maritime Labor Convention
EEBD	Emergency Escape Breathing Device
SOPEP	Shipboard Oil Pollution Emergency Plan
MOB	Man Over Board
SSM	Safety and Security Manual
SCBA	Self Contained Breathing Apparatus
SPV	Sailing Passenger Vessel
AB	Able seaman
PA	Public Address

# 1 PREFACE

On board SPV Royal Clipper it is customary that the Chief Officer or the Safety Officer makes a round among the crew at the muster station. During this round the officer will ask some questions about the muster list and the safety card attached on each crewmember's life jacket. This is done to check the general knowledge of each crewmember and to ensure they know their duties of the muster list.

More than once I noticed that some crewmembers could not answer the questions, a situation which created tension among the officers and the staff. The questioned subject was communicated to the crewmembers at their familiarization training just after embarking the vessel and the participation of drills should give them more insight of the matter at hand in the future.

I wondered whether the problem could be found at the source, the familiarization training itself or the drills performed during their time at sea? I decided to investigate the familiarization training itself, but also to look at the evolution of the knowledge gained during the crewmember's time at sea. All of this resulted in the following research questions.

## 1.1 Main and sub questions

### 1.1.1 Main question.

Is today's familiarization briefing sufficient enough for all crewmembers on board of SPV Royal Clipper?

### 1.1.2 Sub questions

- Do crewmembers of different departments have needs for other/more extensive information depending on the department in which they're active?
- Which stage of the familiarization briefing is forgotten the fastest and needs more attention?
- Which measures must be taken to improve the familiarization on board of SPV Royal Clipper?

This qualitatively research will start with a literature study in order to investigate how a familiarization has to be executed and which information should be shared during this process. More specifically will the subjects that need to be addressed during the familiarization briefing be named and discussed. The source for this information is the SOLAS Convention written by the IMO, the base for all safety regulations at sea and the STCW Convention and Code. In the next stage of the thesis a survey will be conducted.

In this section of the literature study, the minimum requirements for a familiarization study will be discussed in order to get a clear view of all the items that need to be addressed. The source for this information is the STCW CODE, more specifically chapter VI section A-VI/1; Mandatory minimum requirements for safety familiarization, basic training and instructions for all seafarers and as this study is done on board of a passenger vessel, section A-V/2; Mandatory minimum requirements for the training and qualification of masters, officers, ratings and other personnel on passenger ships. (insight, 2017)

## 2.1 Safety familiarization training.

Before being assigned to shipboard duties, all personnel serving on board of a passenger vessel operating in international waters should have attained the abilities that are appropriate to their duties and responsibilities (insight, 2017).

In order to be able to contribute in the implementation of emergency plans, instructions and procedures, all employees should be familiar with the general safety features on board of the vessel such as fire control plans and the muster list. A good knowledge of the location of the essential safety and emergency equipment is a must. Furthermore, it is of great importance to have a good personal conduct during emergencies.

The main goal of the familiarization training is to make the new embracing crew mindful of significant safety measures and procedures that are to be carried out on ships while working or during an emergency situation. It is a crucial step in preparing them for the awaiting period at sea, regarding safety and personnel health. It is the responsibility of the safety officer to train the new embarking crew regarding:



- Instructions on SOLAS and MARPOL
- The important features of the muster list
- Guidelines on how to tackle all kind of emergency situations on the ship
- All the different documents and publications of the ship
- The ships fire control plan
- Different types of firefighting appliances and procedures to use them

In order to contribute to the effective communication with passengers during an emergency the STCW code refers to the following abilities that need to be mastered (IMO, SOLAS, 2017).

Ability to :

- Communicate in the working language of the ship.
- Non-verbally communicate safety information
- Understand one of the languages in which emergency announcements may be broadcast on the ship during an emergency or drill

Apart from duty and safety instructions, the officer in charge of the familiarization training has to instruct the new crew members regarding important issues such as

- Garbage management plan and how to handle garbage on ships
- Oil pollution prevention plan
- Ship Security Plan
- Life boat release procedure
- Life raft release procedure
- Use of maritime distress signals and flares

It is to note that training on life saving appliances and firefighting appliances must be completed as soon as possible and not later than 2 weeks after joining the ship. In addition to the previous mentioned topics, the officer in charge of the training must also ensure that the new embarking crew is made aware of the following subjects:

- The location of life jackets and immersion suits, along with the procedure to wear the life jacket
- Location of escape routes
- Actions for man over board situation
- Different types of alarms on board ship
- Location of his or her cabin, along with the location of the nearest escape route and fire extinguisher
- Procedure for abandon ship alarm
- His or her duties in the muster list and during emergency situations
- Basics of fire prevention on ships
- Actions to be taken in case of medical emergency before further medical assistance is received
- Operation of fire- and watertight doors fitted on ships
- Important instructions on various drills on ships
- Procedure to operate fire extinguishers
- Procedure to raise an alarm in case of an accident or emergency

## 2.2 The muster list

On board of a seagoing vessel various emergencies may occur due to different issues such as machinery malfunction and human error. If the crewmembers are not prepared for such situation, this leads to fire, collision, flooding, grounding and eventually to loss of life. Hence the IMO introduced the muster list via the SOLAS Convention.

The muster list is one of the first things that needs to be addressed when giving a familiarization training. During the familiarization training the assigned duty for each joining crew member must be addressed and thoroughly explained.

The muster list consists of duties and responsibilities designated and assigned to each person on the ship; in other words, it is a list of the functions each member of a ship crew is required to perform in case of emergency.

Because it is a document that specifies the specific task for each individual crewmember in case of an emergency, it should be displayed in exposed locations on board where it is clear for everyone to read and easily accessible. Such locations may be, but are not exclusively, crew recreation areas, crew mess, bridge, engine control room.

**Important features which are displayed on the muster list are the types of emergencies and the different alarms associated. Key emergencies such as fire, man over board, abandon ship, oil spill, etc. are listed along with their specific audible and - if present - visual alarms. All the signals and alarms are visually presented on the list for additional clarity.**

The muster list includes details of the GA alarm and PA system and the actions that need to be taken by crew and passengers when this alarm is sounded. The list specifies how the order to abandon ship will be given, which is usually by the Master's verbal order.

The muster points are clearly specified for every crew member individually and in general for passengers in case of a passenger vessel.

The instructions on the muster list should be provided in the working language on board as well as in the language dictated by the ships flag. The list must be up to date and ready before the ship proceeds to sea. Regulations and requirements for the muster list for passenger ships are specified in SOLAS Chapter III, Reg. 8 and 37. (see below)

SOLAS Chapter III, Reg. 8

- Clear instructions to be followed in the event of an emergency shall be provided for every person on board. In case of a passenger ship these instructions shall be drawn up in the language or languages required by the ship's flag State and the English language.
- Musterlists and emergency instructions complying with the requirements of regulation 37 shall be exhibited in conspicuous places throughout the ship including the navigation bridge, engine control room and crew accommodation spaces (IMO, SOLAS, 2014)

#### SOLAS Chapter III, Reg. 37

1. Each passenger ship shall have procedures in place for locating and rescuing passengers trapped in their staterooms.
2. The muster list shall show the duties assigned to the different members of the crew including:
  - Closing of the watertight doors, fire doors, valves, scuppers, side scuttles, skylights, portholes and other similar openings in the ship;
  - Equipping of the survival craft and the other life-saving appliances;
  - Preparation and launching of survival craft;
  - General preparation of other life-saving appliances
  - Muster of passengers;
  - Use of communication equipment;
  - Manning of fire parties assigned to deal with fires;
  - Special duties assigned in respect to the use of fire-fighting equipment and installations.

The muster list shall specify which officers are assigned to ensure that life-saving and fire appliances are maintained in good condition and are ready for immediate use.

The muster list shall specify substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions.

The muster list shall show the duties assigned to members of the crew in relation to passengers in case of an emergency. These duties shall include:

- Warning the passengers;
- Seeing that they are suitably clad and have donned their lifejacket correctly;
- Assembling passengers at muster stations
- Keeping order in the passageways and on the stairways and generally controlling the movements of the passengers
- Ensuring that a supply of blankets is taken to the survival craft (IMO, SOLAS, 2014).

## 2.3 Fire Control Plan

The Fire Control Plan (FCP) is a mandatory necessity of SOLAS Convention described in Regulation 15 of Chapter II (See Below). The Fire Control Plan offers important information about the requirements for each fire station on each deck of the ship.

The control plan provides various information about fire alarms systems, fixed fire installations such as HI-FOG or CO<sub>2</sub>-systems and extinguishing appliances. The FCP should include a detailed layout of the ventilation system including all the particulars of fire dampers and fans and a description of the remote operated dampers. The position of various dampers, their marking, and which fan is for particular compartment or deck is also explained so that required damper and fans can be closed in case of fire. Next to that, the FCP has to be issued in the working language of the ship.

In order to further maximize the understanding of the Fire Control Plan, graphical symbols are used. The graphical symbols used in the fire control plan should be as per regulation issued by the IMO Assembly Resolution A.654(16). It is in the first place the duty and responsibility of the embarking crew to make himself familiar with these symbols, however the safety officer should question and provide sufficient information on the various symbols.

The FCP should be permanently consultable, for both the officer on watch and the on scene coordinator. Besides, it is mandatory that several copies are kept in exposed locations such as the navigating bridge, engine control room and crew accommodations like the crew mess.

At least one copy of the FCP should be available ashore at the head offices of the Company, where it is available to the DPO and CSO.

Copies of the FCP must be provided to each of the members of the fire patrol team in a passenger ship and also posted at each continuously manned central control station.

A copy of FCP should be permanently stored in prominently marked weathertight enclosures outside deckhouse for assistance of shore side firefighting system in case the ship is in port or in dry-dock.

Also with the permission of Administration, namely classification society, the details can be set out in the form of a booklet and a copy of it has to be provided to each officer onboard, especially to the safety officer. One copy should be

available on board and easily be accessible. These plans should be kept up-to-date and if alterations are made, these should be recorded as soon as possible. The fire plan has to be available in the working language of the crew on board and also in English language.

### **Importance of Fire Control Plan**

- The Fire Control Plan is not just a paper requirement for the classification society or the port state control, but it's a document that is important to understand
- It provides new embarking personnel with the location of the various firefighting and safety equipment available on board
- Location of nearest and safest firefighting equipment and escape route when fighting fire on ship
- Since the port firefighting station team is not up to date about the ship arrangement, the fire control plan has to be a useful and easy to read document, in order to tackle major fire on the ship by port fire fighters.
- The Fire Control Plan is an important part of safety management plan of the ship and any discrepancy may lead to non-conformities against the SMS
- A copy of Fire Control Plans kept by the shore officer is also inspected while issuing/re-issuing the document of compliance (DOC) and safety management certificate (SMC) to the company

SOLAS Chapter II Regulation 15 (IMO, SOLAS, 2017)

General arrangement plans have to be permanently exhibited for the guidance of the ship's officers, showing clearly for each deck the control station, the various fire sections enclosed by A class division, the sections enclosed by B class division, together with particulars of the fire detection and fire alarm systems, the sprinkler installations, the fire-extinguishing appliances, means of access to different compartments, decks etc., and ventilating system, including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section.

Alternatively, at the discretion of the administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy should be at all times available on board in an accessible position. Plans and booklets should be kept up to date. Any alternation thereto has to be recorded as soon as practicable. Description in such plans and booklets has to be in the language or languages required by the administration. If the language is neither English or French, a translation in one of those languages shall be included.

A duplicate set of Fire Control Plans or a booklet containing such plans has to be permanently stored in a prominently marked weathertight enclosure outside the deckhouse for the assistance of the shore-side fire-fighting personnel.

In ships carrying more than 36 passengers, plans and booklets required by this regulation have to provide information regarding fire protection, fire detection and fire extinction based on the guidelines developed by the IMO in SOLAS.

## 2.4 Safety booklet

On board SPV Royal Clipper the safety booklet is a part of the safety training on board. It's a by the company made booklet that can be found in every crew cabin. In this booklet all the basic safety features of the company are explained. In addition, there is a quiz inside.

The quiz is included to give the crew the opportunity to test themselves. The booklet must be signed when embarking in the cabin as proof that it has been read. (see appendix 3 )



## 2.5 As is situation

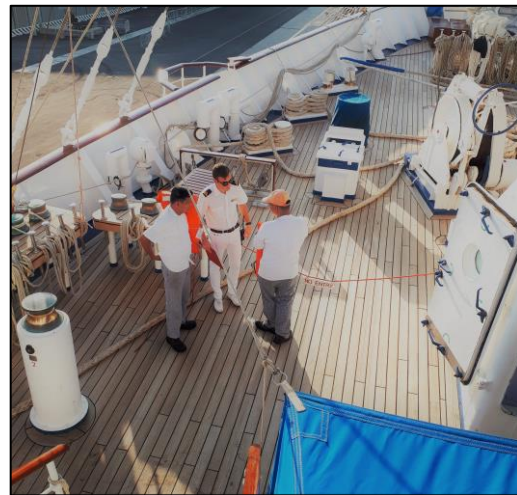
As this thesis is made during my second internship on board SPV Royal Clipper, I had the opportunities to observe several familiarization training sessions. The familiarization training on board SPV Royal Clipper is given by the safety officer. During my time on board, I had the pleasure of working with two different officers. To be able to give recommendations we must first take a look how the familiarization training is performed now on SPV Royal Clipper.

### 2.5.1 Scenario

Following is a brief scenario of the familiarization as it is given on board these days. The briefing is given by following the familiarization checklist provided in the ships Safety and Security Manual (see appendix 1). This check list is only used as a guideline, it doesn't describe a specific *modus operandi*.

The familiarization session starts by checking if everybody who should be present is present. This takes place just outside of the bridge as this is the usual meeting point for this training. After this check, the first item discussed is the donning of the life jackets. Attached to each life jacket is a laminated safety card. On this card the individual tasks for during the muster drill are stated on one side. On the other side the emergency signals are mentioned by means of symbols.

Following the donning procedure, each handling is verbally explained and the group proceeds to the front near the entrance of the crew accommodations, also called the foxhole. When arrived there, the alarms are explained and it is made clear that this is the end of fire zone 1 (this is 1 of the 4 fire zones found on board). Next the location of the remaining fire zones are being told.

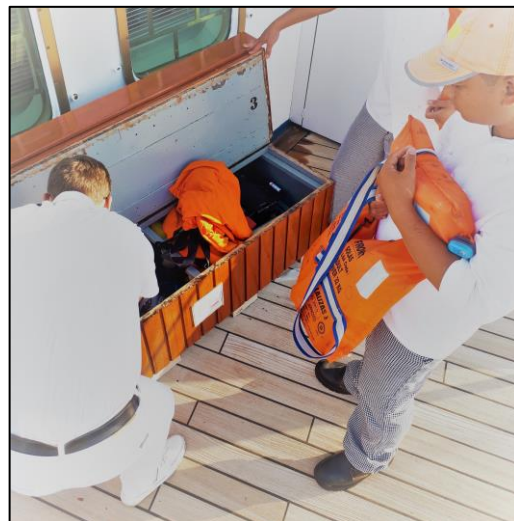


Next, the group proceeds towards the portside man over board rescue boat. In case there are people who have a duty assigned with this craft they will be shown where to be and what to do.

The life rafts are placed near to the rescue boat and are the next subject being discussed. The safety officer explains that the rafts with even numbers are stacked on the starboard side and the odd numbers on the portside. Because SPV Royal Clipper is equipped with davit-operated life rafts, the operating method for the davits is being explained deeply.



As the group is at the port side life raft station, they proceed to the fire lockers which are right behind this station. They are opened and the instructor explains what can be found inside the lockers. If there are people assigned to fire team, their duties will be explained.



Furthermore, the group will cross over to the starboard where the immersion suit locker is located and shown.

While walking towards the aft of the ship, the group stops for a moment at the life boat embarkation platform where the instructor explains how many people can go in one craft. Then the group proceeds towards the aft deck. On the way to the poop deck they pass the lockers with the extra life jackets on the sundeck.



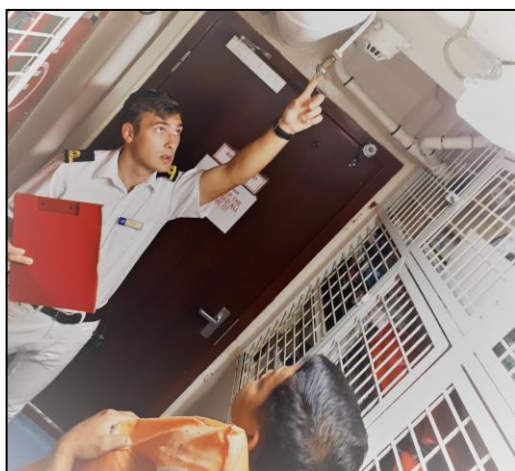
When the team arrives on the poop deck of the ship the different types of fire extinguishers are being shown and their uses are described.

This rounds up the outside part of the familiarization training session, after which the group proceeds inside to the aft crew accommodations by means of the aft staircase.

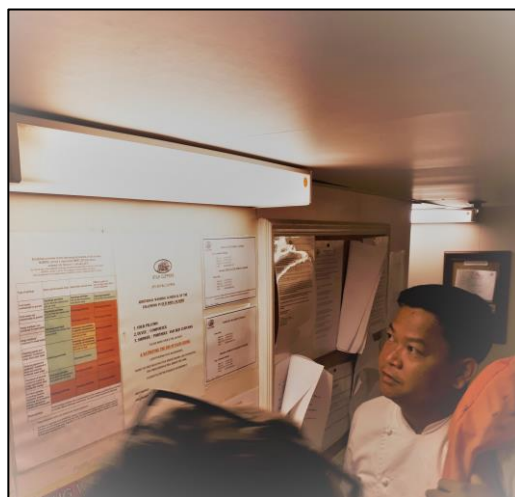
Just before entering the aft crew accommodations, the group passes a muster list. The instructor will show everyone's name on the muster list and indicate that the tasks on the muster list are the same as on their life jackets muster card.



When the group stops at a fire hose locker, the instructor will open the locker and explain the content of it and how to connect the fire hose. Following, instructions on all fixed firefighting systems will be explained.



After entering the aft crew accommodations, the group will walk into the aft crew information board. Here the alcohol policy of the company is being told, as well as the DPA and Asst. DPA of the company. The MLC conventions are being discussed briefly. Next to that, the group gets told who is the company complaint advisor and the ship security officer.





The group will proceed towards the entrance of the engine room and the watertight door located just in front of it. On the way, the low locations light strips and the manual call points are shown.

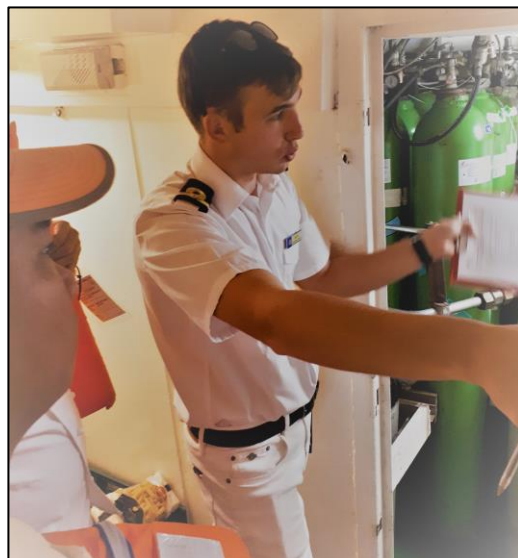
When passing through the corridor the group will pass two different EEBD's. Both systems are being opened and explained how to use.



When arriving at the watertight door, the group is briefed on how to operate the doors. Everybody gets the opportunity to open the door manually. The dangers are made clear. It is of great importance that nobody passes through a closing door as they won't stop while moving.



Next, the group will proceed through the dining room and the pantry towards the galley where the fixed CO<sub>2</sub> is being shown. Arriving on deck 1 the group will proceed to the HI-FOG room. On the way, the different escape roots and hatches are shown. The HI-FOG room is opened and an explanation on what is found inside is provided. Next the group will proceed one deck up towards the exits of the previously shown escape routes.



The training ends with the safety officers offering a moment for questions and if needed additional explanation. After all questions are answered, all participants need to sign the checklist. Finally, the safety officer signs as well. When the captain signs the list in the end, it is classified and kept on the bridge.



## 3 METHOD

The purpose of this is to map out how the content of the familiarization is recorded and remembered by the person who followed it. In addition, a second questionnaire will be taken to show whether the respondent still remembers the information given during the familiarization or whether he or she knows the information more in detail (by applying the theory in practice).

### 3.1 Questionnaire

This thesis is a qualitatively research into the safety knowledge of all crew members. It is not a study to target individuals, therefore the anonymity of the crewmembers will be respected. After each session the correct answers are given to the person involved. In that way it is not only an interrogation but also a learning moment.

#### 3.1.1 Goal

The ultimate goal of the surveys is to expose any difficulties or sore points. After that, it will be examined whether there are differences between the various departments. More concretely, it will be investigated whether certain shortcomings occur more in a particular department than in the other. If department-dependent differences are observable, they will be mapped during this phase.

#### 3.1.2 Target group

The target group will consist of members who have just come on board SPV Royal Clipper and have been subject to the familiarization. Members of every department (deck, machine and hotel) will be part of this research. The choice to involve all three departments is based on the fact that all departments follow the same familiarization and to see whether the same shortcomings are noticeable or if they differ from department to department.

The individuals who participated will be assigned a personal code: crew members working in the deck department will be given the code D1,D2, ... crew members working in the Hotel department H1, H2, ... working in the engine room department E1, E2, ...

### 3.1.3 Survey 1

The first survey will take place shortly (one day) after the member has gone through the familiarization. In this way, it will be tested to what extent they have understood and remembered the content of the familiarization. It will thus be tested whether the familiarization is sufficient or not. Any shortcomings that have already been revealed can be taken to the 'to be' situation. In addition, the first survey will also serve as a basis for comparison for the second survey.

### 3.1.4 Survey 2

Subsequently, every person who has been subject to the first survey will participate in a second survey exactly five weeks after the first survey. The same questions will be asked as in the first survey, so the results or answers of the two surveys can be compared with each other. By doing so it is possible to monitor whether there is progress made concerning the knowledge of safety among the crew members after being onboard and participating in drills and additional training sessions.

To insure getting true and honest information the questioned crew won't be told about the second questionnaire. This to prevent them of preparing or studying in advance.

### 3.1.5 Questions

The questions that will be asked in the first and second questionnaire will be drawn up in concrete terms. There will only be one answer that is the right answer. In this way it will be possible to assign scores in a completely objective way. The questions will be asked orally to avoid possible language barriers.

### 3.1.6 Set up

To get the most truthful research the exact answers of every question will be noted in the test results. Using a color code system, it is possible to make a clear distinction between the answers and thus the topics that are better understood and the lesser understood ones.

The test results are displayed in appendix 5 with a color code:

- **Green** indicates a correct answer
- **Red** is a wrong answer

## 4 RESULTS

After concluding the questionnaire it is possible to deduct several trends and differences between the three departments.

### 4.1 Analysis first survey

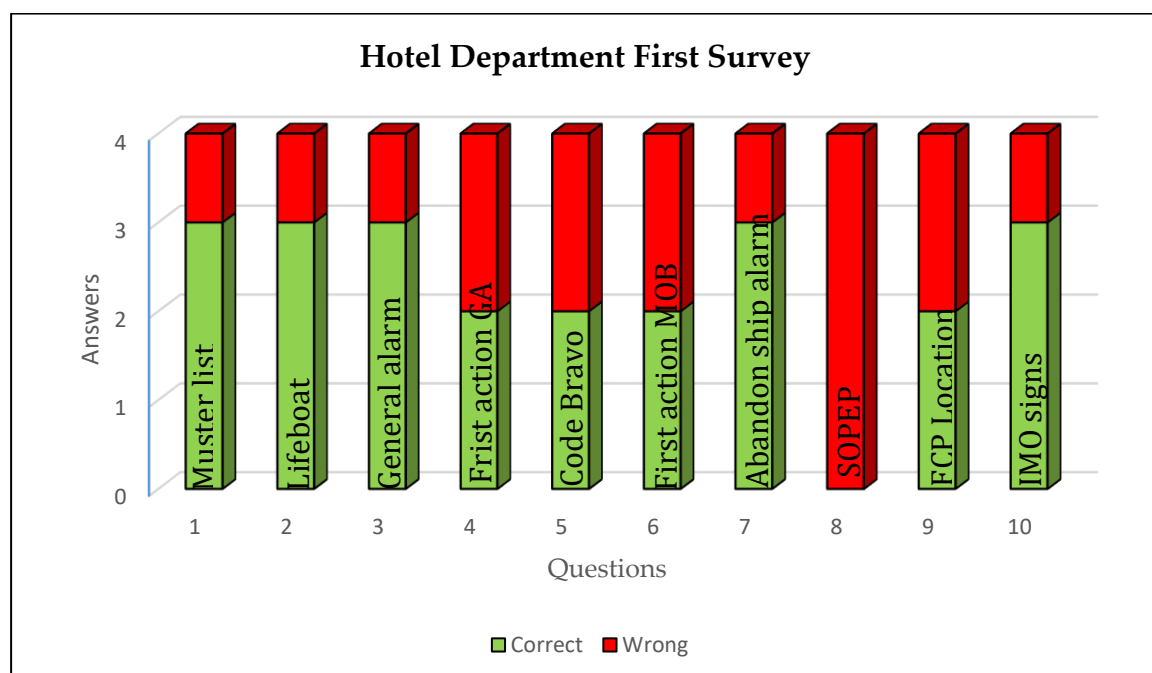
#### 4.1.1 Hotel department

The results of the hotel department show in essence that there is a good understanding of their muster list responsibilities and duties given. However, the locations of the SOPEP lockers and the Fire Control Plan are lacking slightly. During the interviews it became clear that a lot of the hotel staff do not know what the SOPEP lockers are for, let alone that they know where to find them.

In general, the knowledge of the sound signals and the different codes is good with the hotel staff. The signals that are heard during every drill are clearly well remembered.

What concerns the question about MOB situations, the hotel staff showed a good understanding of what should be done in such a situation.

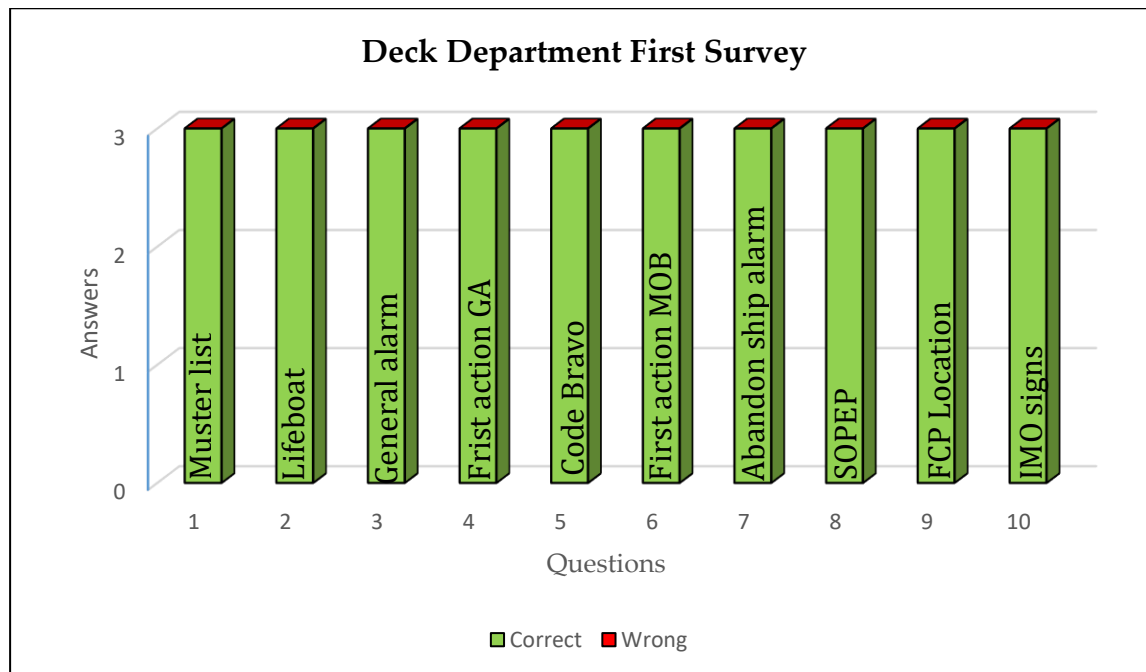
When asking the location of the fire control plan, a little extra information was nearly always needed. They know what it is because of its display plainly in the crew mess. Everyone has seen it but not all of them took it really in. The IMO symbols are well known and understood.





### 4.1.2 Deck department

The results of the deck department are all round excellent. Not a single mistake was made. There is a more intensive knowledge of safety among them. Every question was answered with great speed and remarkable accuracy. They know what the importance of every segment of the safety on board is. The fact that the deck department does most of the maintenance of the safety equipment attributes a lot to the gain of overall knowledge.

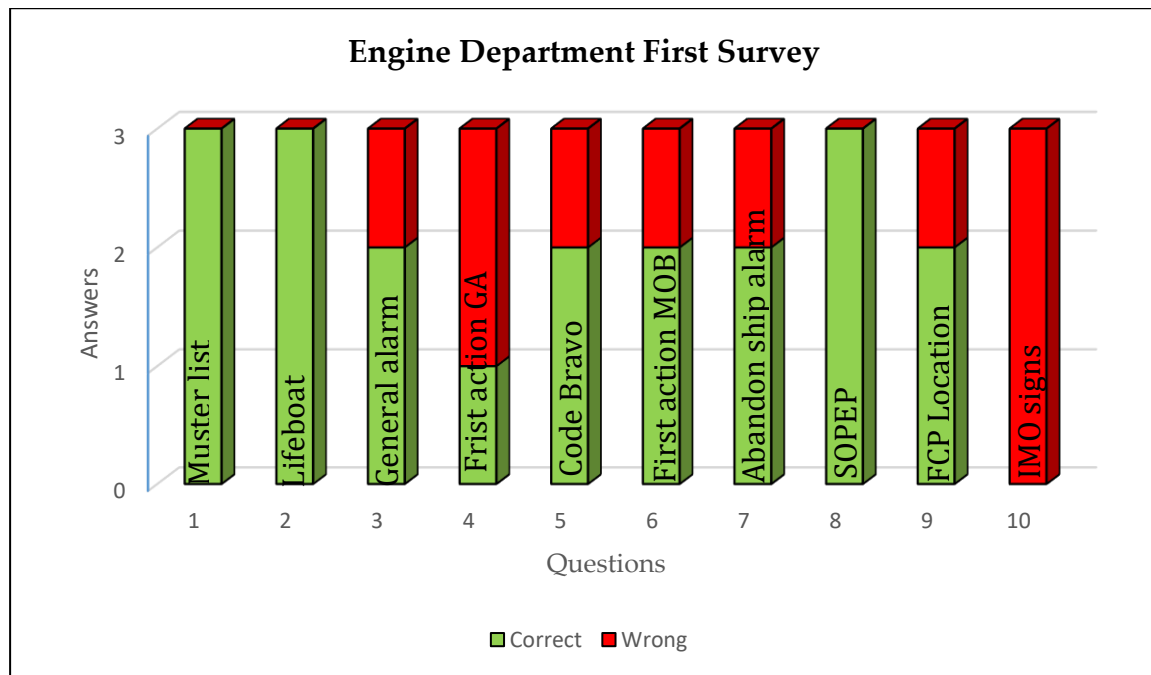


### 4.1.3 Engine department

The questionnaire of the engine room staff shows that they know what their muster list duties are. They know where to be and what to do and where to be in theory. 2/3 of the persons answered faulty on questions about the emergency alarm signals. The same goes for the questions about the IMO signs.

The locations of the SOPEP lockers is well known by all the crew members questioned, this is an expected outcome as nearly all the crew members from this department have to participate in bunker operations that take place in the SOPEP lockers. Also the maintenance of this locker is one of the tasks done by the engine room department.

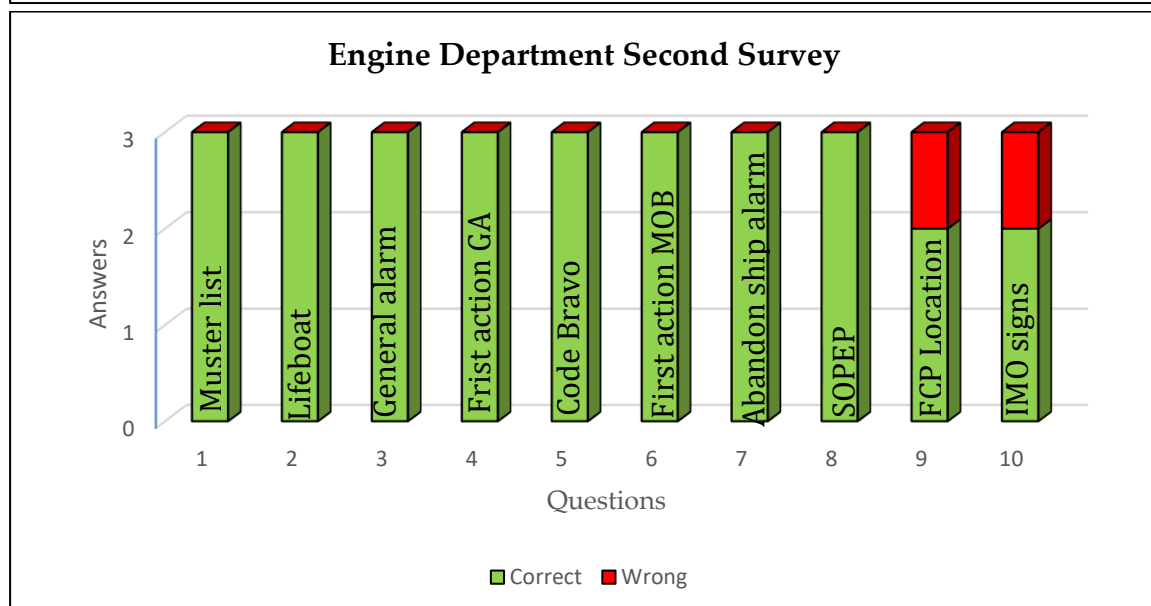
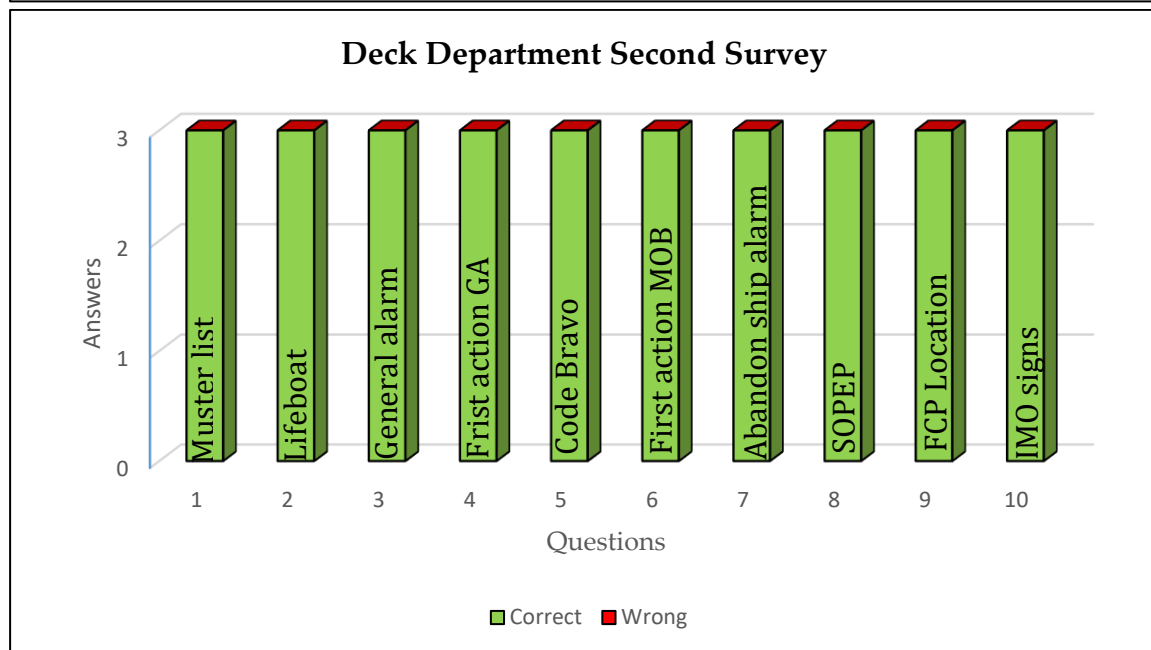
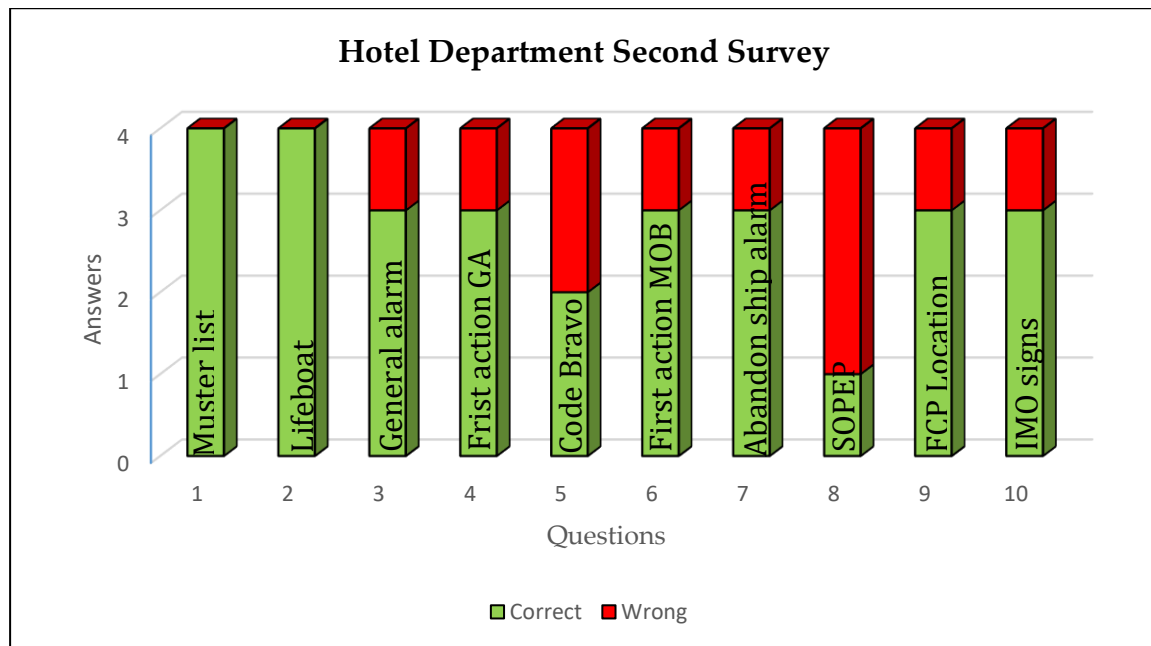
Concerning the MOB part of the survey, the results are above average. Just like the hotel department they know basically what should be done.



## 4.2 Analysis of the second questionnaire

As mentioned above the second questionnaire was done without warning. All the crew members involved didn't know they would be questioned again. They were not able to prepare or study. By this way honest answers could be derived on the primary questions asked in this study.

By using a color code while displaying the data, it is easy to see that the second quiz is greener than the first one. Overall the second questionnaire was answered better than the first. The people answered much faster and there was a better understanding of the topic at hand.



## 5 DISCUSSION

Apart from the deck department every crew member had some mistakes when answering the first questionnaire. The differences between the departments are clearly there as described above. Is this due to the way the training is given? It's hard to give a clear answer to this question. The crew members were just on board and got a lot of information in a very short time. There has only been one drill done.

When we look at the results of the second questionnaire, the weekly drills and the time on board improve the general knowledge of safety. There are improvements but there are still faults made. These are not the hardest questions to answer, so no faults should be made defiantly after being on board for two months or more. A lot of the crew members of SPV Royal Clipper are people who have done several contracts on this ship. It is remarkable and somehow sad that they also lack the basic key components of safety.

Among the three departments there is a different value given to the subject of safety. The deck department is more involved with the matter at hand, they work on it by means of maintenance of the different feathers. Because the hotel and engine department have no contribution in the up keep of the safety features on board it becomes just another thing to know rather than a "métier to master".

This could be a danger when an emergency occurs. Look at the example given above. Crew members may have studied their duties as much as they want, without the practical training the value of their knowledge is next to nothing.

All these results show the amount of theoretical knowledge of the crew members. To get a better picture and an more detailed answer on the main and sub-questions, an extra study could be done. In this study the practical knowledge should be tested.

## 6 RECOMMENDATIONS

### 6.1 Observation of the study

While making this study it became clear that this questionnaire only gave an insight in the theoretical knowledge of the crew members. During every abandon ship drill the safety officer and/or chief officer do a small random round through the crew who are standing at the muster station. They ask simple questions too about the information found on the safety card. Frequently there is a crew member who is not able to answer correctly. This shows that the safety isn't known thoroughly enough.

During this internship there was an audit by the classification society. During this time several crew members were asked what their duties on the muster list were and to execute them. In a specific example some of the hotel staff have the task of assisting the lowering of the life rafts by davit. When they actually had to do this task there were several problems revealed. They did not know how the davit exactly worked and how it had to be operated. During each drill they were at the position described on the list but, once there, they had no clue of what the task included. It is in moments like these that the knowledge of every crew member should be questioned again.

### 6.2 Working points

On board SPV Royal Clipper the crew works in three main departments who create a dynamic and well-functioning enterprise. Seen from the outside it looks like a whole. But in fact, there is not that much roofing between the various departments. Each department has its own tools and tasks to complete.

One of the only things that has or should have the same value for every department is safety. The importance is so great that it should be known and understood by every single person working on board.

To give recommendations a person should have experience and know how to give valuable solutions and insight. With this in mind I tried to speak a brainstorm with as much people as possible.

Following are a few key components of the safety system that could use some minor improvements.

## 6.3 Training / familiarization training.

### 6.3.1 Training

The key in having a well organised crew is training. It starts with the familiarization and muster drill exercises. But it doesn't stop there, more training sessions should be given on a regular basis. On board SPV Royal Clipper there is a matrix showing how often a drill or training should be given in the SMS.

The problem for the crew members on this ship is time. SPV Royal Clipper is beside a ship also a vibrant working luxury hotel. The staff of the hotel department doesn't work in shifts like the deck and engine department. The hotel runs like a train during the day because of the standard the hotel crew must deliver.

They have less time to interrupt their daily tasks to attend a training. It is nearly impossible to let the complete galley team attend a training session. Therefore, a solution could be to give the same training sessions for parts of the crew from every team. In that way there would be less interruptions in the daily schedule of the involved teams and crew members.

### 6.3.2 Familiarization training

Looking at the familiarization training, it is my strong believe that a more practical training session would be more suitable. Going around the deck and showing where everything is found is good. But a practical experience combined with a theoretical explanation would more benefit the new embarking crew. For example when the fire lockers are being opened, why not let the participants of the training put on the fire suit or change the air bottle of a SCBA-set.

Explain and show the practical side of their assigned duties on the muster lists. If there assigned duty is to operate the life raft davit, then let them operate the davits. Let them undo the lashings and swing it around once. After they got the feeling of their job they will know how to do it and more important the safety officer will know that they know.

## 6.4 Time for safety

In the recommendations mentioned above time is the key issue. The simple fact is that to train, time is needed. But in a industry as this one time is money. The ship must be at the destination in time, the passengers must have food and their cabins should be cleaned with great perfection.

Providing the training sessions on board SPV Royal Clipper is task assigned to the third officer together with his navigation watch and the maintenance of the safety features and the regular safety checks. All this tasks make it nearly impossible to give detailed training opportunities for all crew members. At the moment he or she could find a moment for training which fits both in his own as in the schedule of the person who needs to be trained but also in the one of the team and department where the person in question is working.

During my time on board the familiarization training was done on embarkations day at 18:45. This is one hour some fifteen minutes before the beginning of the third officers watch in order to have enough time to give the training and have dinner before the watch. During the watch the last preparations for departure must be made and there would not be sufficient time for training.

A solution for the problem of time could be hiring a person whose sole responsibility would be safety. There is more than enough work to be done on board SPV Royal Clipper. This could be done in several different ways.

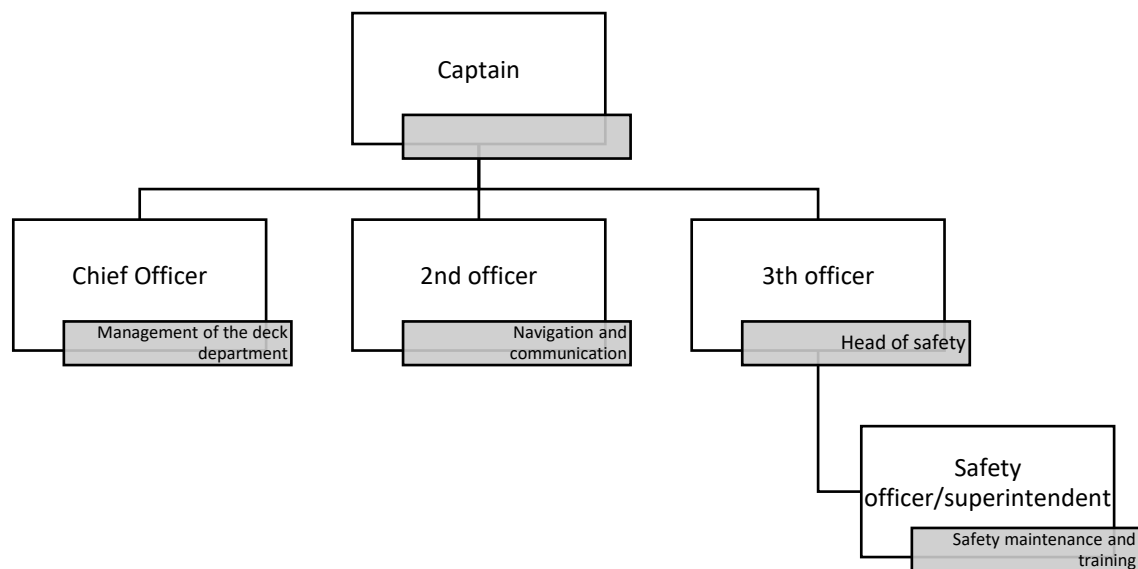
- Safety officer/ superintendent.
- Staff captain

### 6.4.1 Safety officer/ superintendent

The role of a person in this position could be a supporting role for the watch keeping officers on the bridge. This position should be filled by a person with a nautical education and a vast amount of advanced safety certificates.

He or she should not take part in the navigational watch but should be employed in a day workers function. This would give the person in question the time to give a lot of training and the ability to keep up with the safety maintenance and checks that need to be done.

As there would not be a need of advanced knowledge and experience at sea like a staff captain, this solution could be cheaper.





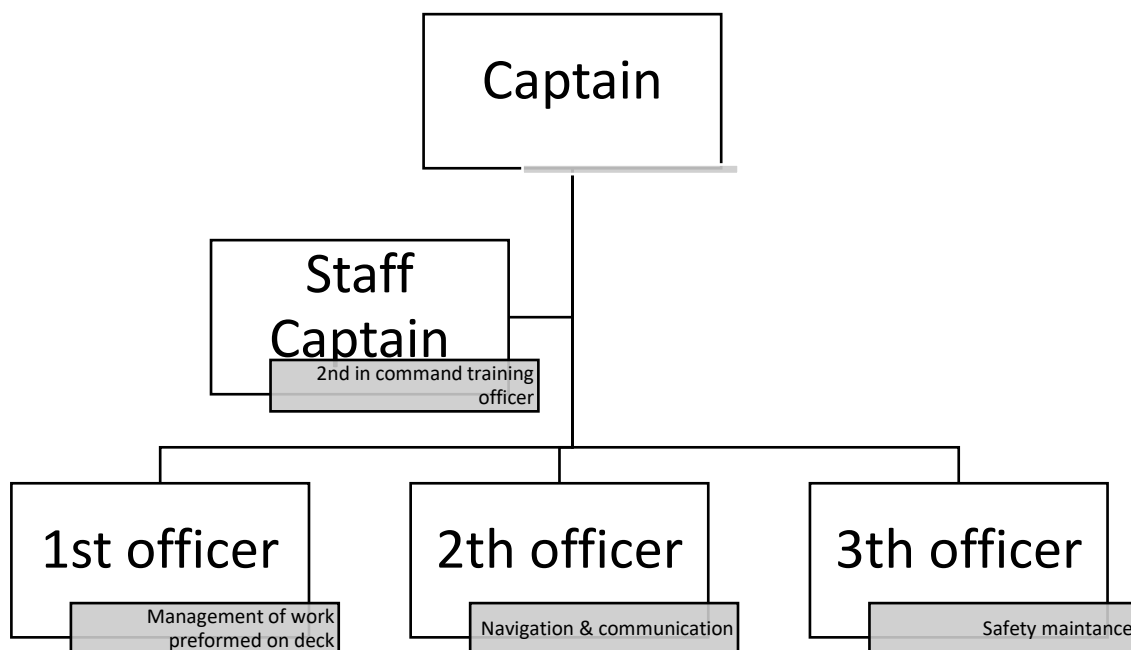
#### 6.4.2 Staff captain.

If there would be a staff captain on board of SPV Royal Clipper, this person's job description could be a supporting role for the captain as well as for the chief officer. The staff captain could work following the same time sheet as the captain.

His or her role could be between the one of chief officer and the captain. By taking over the *staff* rank from the chief officer who could be ranked first officer instead, this person would become the representative of the deck department among the rest of the staff. By staying second in command there would be a slight change in the ranks.

He or she could take over part of the non-navigational duties of the chief officer like for example garbage management. And in addition the staff captain could give the safety training sessions. He or she should not take over the responsibility safety equipment maintenance, this would remain the task of the third officer.

By choosing for this option it could be possible that the staff captain would be able to deliver certain certificates. This should be further investigated. This system could allow a greater level of training as this job can only be filled in by a person with a lot of experience and time at sea. As it would be more expensive, the question of 'what is safety worth?' comes in the picture.



## 6.5 Muster list

The muster list on board SPV Royal Clipper is a document that is straight forward. It has been like this for several years without any major changes. Because most of the crew on board has done several contracts on this ship, they have had nearly always the same sections to clean or the same position in the galley and so also the same type of duty on the muster list.

It would be good to have more a rotation in the muster list. In that way crew members could learn more of the different duties that need to be done. For example, let some of the waiters be stationed in a fire team. Or place one of the AB in the medical team. They would gain more knowledge and it is possible that a waiter who works the whole day knows more of the inside of the ship then one of the deck guys. They could share knowledge and experience.

Of course, there is a limit of what can be changed, it would not be logical to place a cabin steward (whose duty is to check if the people in his cleaning station are safe) in a fire team.

Over time the crew members would know more of several duties and they would feel more part of the safety system. They would be faster to react to an upcoming emergency because they would know what to do based on previous filled positions on the muster list.

To achieve this the class must approve this and a new muster list must be made.

## 6.6 Safety booklet

The safety is beyond doubt a good addition in the familiarization process on board SPV Royal Clipper. It is a great source of knowledge and could be a good repetition method for all crew members. However, it is greatly outdated. Since its introduction in Jan. 1998 (see appendices 8.3), there have hardly been made any changes.

During the time of this study the CSO of Star Clippers Ltd. Madame Gosia Galej came on board in preparation for an upcoming MLC inspection. During her time on board the issue of the outdated booklet was brought to her attention. She decided to make a new updated version of this tool.

## 6.7 Examination

Looking at examples in the offshore industry, it could be possible to introduce a safety examination. An examination which must be completed without any mistakes to force new crew members to know the safety on board. If the exam is not passed the first time a second attempt is allowed. If once again not passed a written warning will be issued and a third and final attempt should be completed. If still not passed, the contract will be terminated.

Although this seems a harsh method, this solution deserves some more attention. The value of safety on board is greater than any other feather. There are enough examples in the past that prove this theory. All crew members should be aware of this and this is one of the more effective ways to do this.

Perhaps this way of working will first be a joke until the time there will be a crew member who loses his contract. It is in such moments that the rest of the crew will get the message about safety and its importance.

## WORDS OF APPRECIATION

The amount of knowledge I gained out of all the different brainstorm sessions with my mentor Chief Officer Dominique Rollin, Captain M. Szalek and Mr Henk Visser is invaluable to me. I would like to thank them tremendously for everything they did for me.



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## APPENDICES

### 1. Familiarization checklist Star Clippers

#### CL 01 - Familiarization - Initial

In compliance with the STCW VI/1, VI/6, I/14 and company requirements, every crew member joining the vessel shall receive initial familiarization before voyage begins.

Item	Description	Check ✓
1	Muster List - Alarm Signals (general, fire, MOB, abandon, oil spill), assembly and embarkation stations, personal duties	
2	Elementary safety matters and understand safety information symbols, signs and alarm signals	
3	Lifeboats, Rescue Boat, Life rafts – location, equipment and use	
4	Life Jackets and Immersion Suits - location and donning	
5	Lifebuoys – number and location	
6	Fire Control and Safety Plan	
7	Fireman outfit and Breathing Apparatus – number, location, donning	
8	Emergency Escape Breathing Devices – number, location and use	
9	Fire Locker – location and equipment	
10	Fire main, Fire Hydrants, Fire Hoses, Isolation valves	
11	Fire doors and watertight doors – location and operation. Keeping the watertight and fire screen doors clear from any items.	
12	Portable Fire Extinguishers, types, location and use	
13	Alarm Bells, Manual Call Points, raising the alarm. What to do if fire or smoke is detected / fire alarm is sounded	
14	Fixed CO <sub>2</sub> Systems	
15	Emergency fire pump - location and starting. Emergency Generator – location.	
16	Action upon encountering an accident or other medical emergency before seeking further medical assistance on board.	
17	Emergency escape routes and Exits	
18	What to do if abandon vessel alarm is sounded	
19	What to do if somebody falls over the board	
22	LSA and FFA Training Manuals (officers and rating recreation rooms)	
23	Company Alcohol Policy and Uniform Policy	
24	Designated Person Ashore - role and contact details	
25	Security aspects initial familiarisation: access to the vessel, CSO/SSO contact details, security levels, how to report security incident, procedures to follow when a security threat is recognised; be able to take part in security-related emergency and contingency procedures (training shall be conducted by the SSO or an equally qualified person).	
26	Work place occupational health and safety	
27	MLC Procedures, inter alia (but not limited to) record of working/resting hours, compliant procedure, health & social protection benefits	

(Clippers)



## 2. Muster list SPV Royal Clipper

EMERGENCY MUSTERLIST "SPV ROYAL CLIPPER"

ALARM SIGNALS:

Perform your emergency duties on hearing these alarm :

General alarm: fire, collision, flooding or other emergencies : 7 short and one long blast on ship's whistle and alarm bell

Equipped with cap

Perform your abandon ship duties on hearing these alarms:

Abandon ship : repeated long and short blasts on ship's whistle and alarm bell

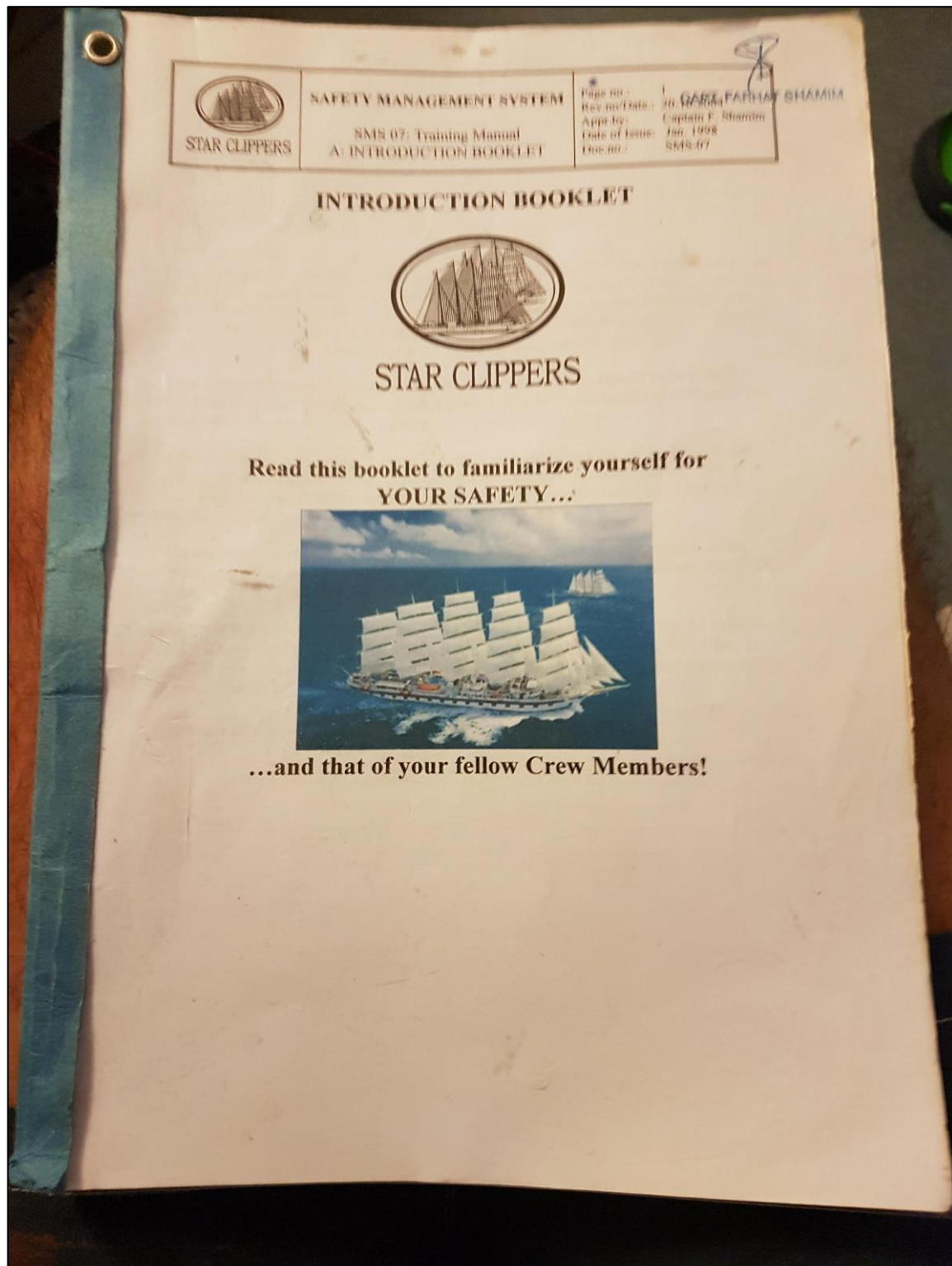
Perform your MOB duties on hearing these alarms:

**Man Over Board:** One long blast and three short blasts on ships whistle and alarm bell

**Note:** All emergency signals should be accompanied by announcements on the public address system.

[illegible]

### 3. Safety booklet



(SMS SPV Royal Clipper, 1998)



#### **4. The correction keys**

1. What is your duty on the muster list?

*The specific duty assigned to the person in question.*

2. To which lifeboat are you assigned?

*The life raft number assigned to the person in question.*

3. What is the general alarm signal?

*Seven short blasts followed by one long blast.*

4. What is the first thing you do in case of general alarm?

1. *Go and get your life jacket.*
2. *Go to your muster station.*
3. *Listen to the announcements over the PA system.*

5. What is the meaning of code bravo?

*Fire on board (by using code bravo it is less likely to create panic among the passengers).*

6. What is the first thing you do when you hear the man overboard alarm?

1. *Throw a life buoy to the person in the water*
2. *Sound the alarm*
3. *Keep pointing to the person in the water.*

7. What is the signal of the abandon ship alarm?

*One long blast followed by one short blast repeated three times.*

8. Where on board are the SOPEP lockers located?

*On both sides of the ship in the lockers under the staircases leading from the tropical bar towards the sundeck.*

9. Name the locations of the fire control plans?

- *Bridge*
- *Crew mess*
- *Both side of the tropical bar staircase in the red lockers.*

10. What is the difference between these two symbols?



*Both IMO symbols are an indication for a life buoy. The first one has no extra features attached to. The second symbol is for a life buoy equipped with a line and a light.*