

QUALITÝ, HEALTH, SAFETÝ, SECURITÝ & ENVIRONMENT BULLETIN (QHSSE)





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BEST PRACTICES C.O.T.'s GRATINGS

Author: D/C Aitor Lastitegui Vessel: Panagia Thalassini

The metal grating of the main hatch is a security accessory which don't receive the needed importance.

The tank cleaning is the operation where this grating is more used, especially when lowering tools inside the tanks; tools like the wildem pump, buckets, rags, mops, etc.

The main problem is that after heaving up/lowering tools from the tank, normally is forgotten to put back the grating in the security position.

This is a lack of awareness and if it is added a lack of attention, it can cause going inside the tank by the wrong direction being very dangerous and a serious risk of falling down by any crew member.





SECURITY ROPE TO SECURE THE GRATING

Besides encourage to all crew members about the dangers and associated risks that are involved in using the grating on a wrong way, remembering to put it in the correct position according to the operations there are taking place.

The way to operate this grating is easy, it just has two positions:

security position. it is placed to enable the crew going inside/outside the tank, closing the other access. <u>when the grating is in this position, it will be secured with a rope.</u>





Position for heaving up/lowering tools. when the grating is in this position, the access to the tank is blocked, making an additional space to heave up/lower tools inside the tank.



After the use of the grating it has to be put back in the security position and secured with the rope to avoid any access to the tank by the wrong way.

With this safety purpose I come along to the actual best practice. it can be added in the enclosed spaces entry explanations as an important point to be aware





TESTING OF MOORING WINCHES BEFORE ARRIVAL AT PORT

Author: D/C Sara Soberon Vessel: Panagia Thalassini

The mooring winch is a mechanical device usually located at the foredeck and aft deck for moving heavy weights such as anchor, mooring lines and tug lines.

The mooring winch very important have to be test prior to arrival at port many incidents happen that when mooring operation will commence the winch has a problem mechanical failure, the winch no appropriate power of the winch, the gear box, and the clutch adjustment for the mooring operation. The break not working properly those are some issues that may be encounter when not checking or testing. When this happens it cause of delays of the ship and the cargo operations which very big problem.







Before arrival at port



It is best practice to test the mooring winches before arrival in port if have any problem occur or issues before arrival it can make a remedy or fix the problem prior to arrival at port for mooring and unmooring operation and anchoring operation.

Mooring winches testing the power source, the brake clutch, checking the motor, the engage and dis engage of the winches and the mooring ropes.









SECURE FREE FALL BOAT DOOR

Author: D/C Pablo Rodriguez Vessel: Panagia Thalassini

During the abandon of the ship the free fall boat may be used. In this case, the main procedures, following the muster list duties, are:

- Proceed to the muster station.
- Make sure that no crew member is missing.
- Follow any special order.
- Proceed to embark in the free fall boat.





The emergency that implies the abandon ship situation may not necessarily be related to adverse weather conditions. But it would be probable to have rolling or other type of meteorological phenomena, like strong wind gusts, that could make the embarkation tougher.

We should also remind that although we practice the abandon drill at least once a month, the real situation involves tension and nervousness. Bearing in mind all the above, it would be a good practice to install some means to temporarily maintain the door open during the embarkation.



The idea is to firmly tie an elastic band or a rope to the railing of the embarkation area, next to the door of the free fall boat, to maintain clear the access to the lifeboat and in such a way that the presence of a crew member holding the door is no longer necessary. After embarkation, when all the crew members are on board, the last one to enter would be in charge of taking out the rope, without stepping out of the lifeboat, and finally securing the door for the free fall.







BEST PRACTICES FLAG ROPES

Author: D/C Aitor Lastitegui Vessel: Panagia Thalassini

The ropes of the flags are exposed to several weather conditions at all times; wind, rain, salpetre and the exposure of the sun are the most common wearing elements, as well the tension supported when the flags are hoisted. the smoke of the funnel is also an element to be aware.



A break rope can cause several damages, specially to the radar antenna and the anemometer. the antenna is close to the flag ropes. in case of breaking the rope, if the wind direction is forward, it can fasten into the antenna bringing about to switch off temporally, as well as it can occur with the anemometer.

-DO NOT TIGHT THE FLAG ROPE IN THIS WAY: THE ROPE MUST BE KEEPING CLEAR OF BRUSHING AGAINST ANY SURFACE





- When a rope is damaged or in bad condition, avoid in any case make a knot triving to repair it. a best practice will be replace the rope directly.



- This is the correct way to tight the flag ropes. it must be tight, does not matter if the flag is hoisted, it shall be safely secured.





With this purpose of advertisement, I come along with the actual best practice to suggest periodical checks of the flag ropes. also encourage the crew to replace the flag ropes in case of damage or lost of the operational reliability.

In case of expected very bad weather conditions during a long voyage, promote to remove the flag ropes to prevent damages caused by adverse meteorological conditions





IDENTIFICATION OF AIR WILDEN PUMPS

Author: D/C Pablo Rodriguez Vessel: Panagia Thalassini

On board we have few air operated diaphragm pumps (ADP) that we use mainly for pumping the moisture liquids we have in the tanks at the final steps of the cleaning operations. They are very similar and in order to distinguish them it would be a best practice to mark them with the main characteristics of each pump, such us its maximum air pressure, flow rate, suction lift capacity, temperature operation range or for what product it is used.

The idea is to put a piece of paper attached to the main body of the pump, well visible, to have immediate access to all the information described above.

A proposed scheme for the label could be like the one below:

N° OF PUMP	1/5
PRODUCT	WATER
FLOW RATE	X m3/h
SUCTION LIFT CAPACITY	X meters
MAX. AIR PRESSURE	X bar
TEMP. OP. RANGE	X-Y °C

The labelled pump looks like this:









Hook/fastener for garbage's container covers which are exposed to the inclement weather and vessel's movement

Author: D/C Victor de la Vega Vessel: Santiago I

Problem:

On board the vessel we have different garbage's containers that are exposed to the inclement weather conditions as well as the rolling and heaving, such as:

- Plastic garbage.
- Food waste.
- Paper, Metal, Rags garbage.
- Operational wastes.

On board the vessel, both rolling and heaving are common in day to day, as well as the strong winds. This movements and weather conditions can produce the suddenly close of the lid.

It was observed that all these containers didn't have a hook or fastener to hold the cover when someone wants to throw the garbage. Nowadays, if someone wants to throw the garbage (heavy garbage's bag), they should request assistance from another person to hold the lid while he throws it, because if he tries to do it by himself, the lid could suddenly close, causing some damage or injure.

Possible damages/ injures:

• The cover may close and hit the head or any other part of the body of the person disposing the garbage bag.



Solution:

For those reasons exposed above, we reached the conclusion that this container's covers need some fastener to hold it when someone opens it.

To avoid this problem, we prepared a metal piece which must be able to hold the container's cover even on heavy weather. Those metal pieces were designed with an adequate/properly measurement considering the size and weight of those covers. A piece was considered, because of the simplicity of plastic constructing one from this material, but finally was discarded due to the fragility of the plastic, in time could break. With those fasteners, we avoid the possibility of the suddenly close of the cover causing damage to the person who disposes the garbage as well as the no need to bother another person for the simple fact of disposing the garbage. I think that this solution could be added to the SMS of the company due to the critical damage that it would avoid.









DECK STEAM PIPING PROJECT PROPOSAL

Author: Captain levgen Teslenko Vessel: Panagia Thalassini

During my 2 months trip onboard of Panagia Thalassini, I have pointed, that deck steam piping has moderate rust condition at some areas. Vessel is only 5 Years old and generally steam piping still in satisfactory condition, but time is passing and steel tiredness increases. This leads to more fast rust appearance and deterioration of steel physical properties due to increased diffusion of water by (humidity, rain, wave spray etc) at damaged steel areas.

In order to enhance lifetime of steam piping, protect it in the best way, and make maintenance more effective, less frequent - I want to propose below idea:

- 1. Derusting of all steam piping, valves and branches on main deck.
- Recoating to cover 100% with Reskote T Guard Silicone paint 2 layers with medium thickness.

On my experience silver paint has very low viscosity, and unsatisfactory characteristics against protection of high temperature service piping on open decks. It is not able to get good thickness and protection during pipe expansion when it is under high working temperatures and/or external weather factors. Due to non-elastic structure use of steam piping coated with silver paint frequently leads to cracks in paint.



Before

After



My suggestion is to implement Reskote T Guard for good practice of steam piping maintenance:

QUOTING**

Reskote T-Guard protects deck steam lines, steam valve manifolds and windlass steam chests from the destructive and costly effects of corrosion on sea going vessels and has proven to be especially effective against the very severe conditions found on chemical and product carriers.

Reskote T-Guard is a viscous, high build compound that requires only minimal surface preparation and is easily applied by brushing... no more messy and wasteful smearing of greasy material. Reskote T-Guard withstands higher temperatures for longer periods than any similar product and drastically reduces repair and maintenance cost.

Is a better alternative for Silver Paint because Reskote T-Guard withstands higher temperatures for longer periods. No more paint cracking!

Surface Preparation :

Scrape off loose rust and flaking paint, chip off large rust deposits, sweep or blow with compressed air to remove loose rust and dirt particles, wipe oily deposits off with thinner and ensure that surfaces are thoroughly dry.



Application :

Simply brush on at 1 to 1,5 millimeters thickness. After application, allow minimum of 24 hours curing at ambient temperature before putting steam on line.

To determine the approximate number of pails required for pipe lines, use following formula :

Pipe Dia. Pipe Run (mm) X 3,14 X (meters) X 1,1 = Pails Required

UNQUOTING**

Please see mentioned link for additional information. https://ost.gr/partners/reskote-t-guard-drum-18kg/



PAINT LOCKER ARRANGEMENT

Author: D/C Victor de la Vega

Vessel: Santiago I

Problem:

On board the vessel we have different types of paint and components that are all inside the paint locker. Among these paints and components, we have:

- Epoxy primers.
- Polyurethanes topcoats. (Paint + Curing agent)
- Acrylic topcoats. (Topcoat)
- Thinner.
- Curing agent / Hardener.
- Anti-skid component. Alkyds paints (Internal Space Paint).
- Silicone High Temperature.

On board the vessel, all these paints and components must be managed and used in an effective and efficient way to avoid misuse or unnecessary waste.

It was observed that inside the paint locker, the distribution of both the paints and their components was not the most efficient since it was all together. This produces those paints are used that are not consistent with the surface or the work to be done. Nowadays, if someone wants to paint some space, they should request assistance from another person (qualified person) to choose the right paint for the job to be done. That is the reason why we proceeded to order the paints and their components based on the areas to be worked on and their use.

Cause of arrangement:

• A misuse or waste of the paint, being able to spoil the paint in case of a bad mixture of its components.

• Facilitate the choice of paint depending on the area to be treated



Solution:

For those reasons exposed above, we reached the conclusion that this paint locker needs to be ordered according to the type of the paint and the area to work.

To avoid this problem, the different types of paints and their corresponding components were places on different shelves in order to expedite the choice of paint, as well as to facilitate its inventory.

With this arrangement of the paint locker, we avoid the possibility of misuse or waste of paint, as well as greater management and ease when placing requisitions and inventories.

I think that this solution could be added to the SMS of the company.









MANAGEMENT OF USED COOKING OIL ONBOARD

Author: Captain levgen Teslenko Vessel: Panagia Thalassini

During my service in Marflet Marine and review of company SMS, I found that management of **USED COOKING OIL** is not established in the best way to follow all applicable regulations and tendency.

- Scenario 1: Vessel burning USED COOKING OIL in incinerator are facing problems with 3rd party inspections in regard to this practices and records. Inspectors always request for review of Incinerator certificates and docs, which do not mention that our incinerators authorized to burn USED COOKING OIL.
- 2. Scenario 2: Some vessel mix USED COOKING OIL with sludge thereafter disposed to shore as a ANN1 sludge and recorded in ORB part 1 by CHENG. Taking in mind that USED COOKING OIL this is vegetable oil considered as ANNEX2 in general and under the ANN5 regs it is no any practices on our shipping marked to mix ANN1 with ANN2 which raises complains from 3rd parties inspections as well.
- 3. Scenario 3: USED COOKING OIL must be disposed in suitable storage containers only to shore reception facilities and properly recorded only in GRB. This is the most adequate and reliable method of disposal, which is clear for everyone and will not raise any complaints/concerns by inspectors.



Proposal:

1.Amend Garbage Management plan – implement separate color (ORANGE) coding for storage facility onboard as well as for storage containers.

2.Amend EMS in line for Garbage management with the above instructions and procedures to keep our crew clear with what and how to do in regard to management of **USED COOKING OIL**.

3.Fleetwise prepare and renew storage are in accordance with the above remarks.







SNAP BACK AREA

Author: D/C Aitor Lartitegui Vessel: Panagia Thalassini

Mooring stations are dangerous areas that must be regarded with the correct significance, especially when the vessel is moored in port and during the mooring operations.

These areas are high risky zones due to the tension and the working forces supported by the mooring ropes.

It has to be marked properly to notify of the danger of the area to the crew:

- Mark fore and aft mooring areas across from port to starboard side.
- Mark main deck areas on for spring and breast winches (where fitted) in proportion as per example:



- Paint at the entrance of a mooring area clearly indicating beginning as well as the end of the zone.
- Put some stickers and markings inside the mooring area.





CAUTION: CAN NOT BE PAINTED OR POSTED IN ISOLATED SNAP BACK ZONES BECAUSE THEY GIVE A FALSE SENSE OF SECURITY.



Some examples of markings at the entrance of a mooring area

	FWD MOORING STATION		
	FWD SPRING ZONE		
	AFT SPRING ZONE		
	AFT MOORING	STATION	





30/06/2023



Example of markings and stickers inside the mooring station







With this purpose of safety awareness i come along with the actual best practice to promote the application of these markings & stickers in the mooring stations of company vessels to encourage the crew about the risks involved working in these areas.





Author: D/C Jaime Cuesta Vessel: Santiago I

FIRST AIDS PROTOCOLS (FOR RESPIRATORY ARREST AND CHOCKING SITUATIONS)

Knowing how to act correctly in necessary moments is crucial to be able to solve problems in time. In moments of tension, we can doubt how to act, so it is always good to have simple information at hand to know how to proceed properly.

Observing the accommodation, I have come to the conclusion that implementing several informative photos on basics manouvers such as CPR or the Heimlich maneuver can be helpful in moments where such actions are necessary.

How to perform CPR on adults:

- 1. Check if the area is safe and if the person is unresponsive.
- 2. Call for help.
- 3. Positioning: Place the person on their back on a firm surface.
- 4. Open airway: Tilt the head back gently by lifting the chin with one hand while pushing down on the forehead with the other hand. This helps open the airway.
- 5. Check for breathing: Look, listen, and feel for normal breathing for no more than 10 seconds. If the person is not breathing or only gasping, begin CPR.
- 6. Perform chest compressions:

a. Place the heel of one hand on the center of the person's chest, slightly below the nipple line.

b. Place the other hand on top of the first hand and interlock your fingers.

c. Keep your arms straight, position your shoulders directly over your hands, and compress the chest at least 2 inches (5 centimeters) deep.

d. Perform chest compression at a rate of about 100-120 compression per minute. Let the chest rise completely between compressions.







How to perform Heimlich maneuver:

- 1. Stand behind the person: Position yourself behind the chocking person and make sure both of your feet are stable.
- 2. Assess the situation: confirm that the person is indeed choking and unable to cough, speak or breathe.
- 3. Make a fist: form a fist with one hand, placing the thumb side against the person's abdomen, slightly above the navel and below the lower tip of the breastbone.
- 4. Grasp your fist: with your other hand, grip your fist firmly.
- Perform abdominal thrusts: using quick, upward thrust, exert pressure on the person's abdomen. Each thrust should be a separate and distinct movement. Apply enough force to dislodge the object causing chocking.
- 6. Continue the thrusts: repeat the thrusts until the object is expelled, or until the persons becomes unconscious.

If the person becomes unconscious: lower the person to the ground carefully, keeping their head supported. Immediately begin CPR, starting with chest compressions.



BEST PRACTICES FREE FALL LIFEBOAT DOOR

Author: D/C Xavier Gual Vessel: Santiago I



PROBLEM

The free fall boat (FFB) door is always in contact with the pelican hook of the lashing which we can find astern of the FFB. The problem appears due to the vibration of the vessel and when the door is opened or closed to enter the FFB for check the equipment and carry out its maintenance, hitting the FFB door with the pelican hook.

With the time, we note that door has suffered hits, scratches and take out the door paint.







SOLUTION

To avoid that the FFB door continues to be damaged and protect it we go to put a canvas cover for the pelican hook. That cover will avoid the contact between the FFB door and the metal from the pelican hook protecting it.





The cover will be attached with two ropes avoiding that with the wind can't take out, but it is VERY IMPORTANT that the knot must be a knot easy to remove for don't lose time in case of emergency in case of abandon the ship.







PREVIOUS QUARTER BEST PRACTICES AWARDS

Author: D/C Adriana Saiz

Best Practice: Use of oxygen analizar before entering the FFLB **Vessel:** Panagia Thalassini



Author: D/C Miguel Polvillo Best Practice: the use of cover ropes Vessel: Panagia Thalassini





PREVIOUS QUARTER BEST PRACTICES AWARDS

Author: D/C Fernando Supervielle Best Practice: Bridge Lights Vessel: Santiago I



Author: 2/O Panagia Thalassini Best Practice: Safety awareness at rescue boat area Vessel: Panagia Thalassini





PREVIOUS QUARTER BEST PRACTICES AWARDS

Author: Captain levgen Teslenko Best Practice: MARPOL violation prevention Vessel: Panagia Thalassini



VETTING FINDINGS DURING SECOND QUARTER 2023

SIRE

Chapter Observation

- 5.21 Fixed auto gas sampling system was fitted in CCR to monitor Ballast Tank & non-cargo spaces atmosphere and the system monitored HC-%LEL contents. However, the OOW and PIC were not familiar with alarm setting points and alarm setting procedures at the time of inspection.
- **10.32** The pressure gauge fitted on the steam inlet pipe of the cargo tank cleaning heater located in the cargo cleaning heater room was out of service at the time of inspection. This observation was rectified during inspection.



Marflet



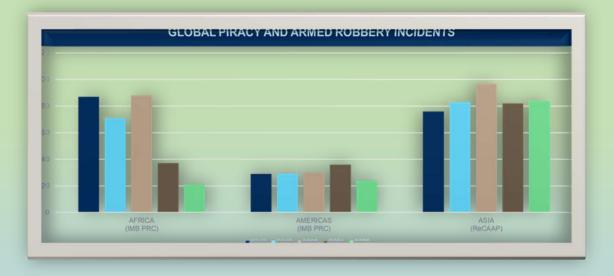
SECURITY Piracy trends and high risk areas

Despite reports of global piracy declining for the second year in a row, the number of robbery incidents in the Singapore Strait reached a seven-year high in 2022 and vessels anchored in South American ports continue to be attacked by violent perpetrators.

Global piracy and armed robbery numbers decreased in 2022, according to the International Maritime Bureau's Piracy Reporting Centre (IMB PRC). Its latest annual report shows a 13% drop in overall attacks in 2022 compared to 2021, a reduction that is primarily attributed to the decrease in piratical activity in the waters of the Gulf of Guinea. A closer look at the figures also reveals a welcomed decline in reported robbery incidents at the Callao Anchorage in Peru, however, the levels of violence used by perpetrators towards the crew in many of the incidents reported from South American ports give cause for concern. So does the sustained rising trend of armed robberies against vessels in the Singapore Strait, and the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia Information Sharing Centre (ReCAAP ISC) reported a 2% overall increase in total incidents in Asia in 2022 compared to 2021.

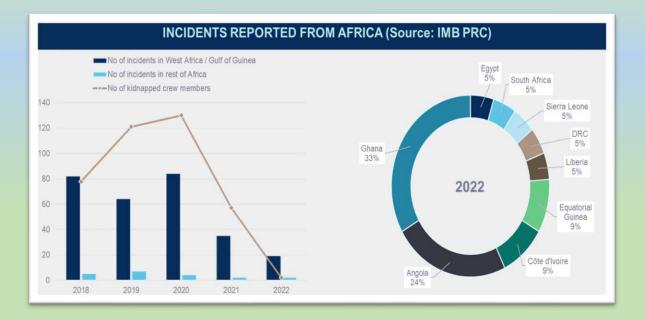






Africa

The increased presence of naval vessels and cooperation between coastal authorities in the Gulf of Guinea continue to positively impact the piratical activity reported in that region. The number of incidents reported from the region in 2022 decreased by 46% compared to 2021 and by a factor of four compared to 2020. Crew kidnappings have also decreased, from 57 crew members taken in seven separate incidents in 2021 to two crew members taken in a single incident in 2022. However, the IMB PRC emphasizes that the Gulf of Guinea waters are still dangerous despite the recent positive trend. The fact that two vessels were hijacked in 2022, with 29 crew held hostage, and another vessel was fired upon while steaming, demonstrates that the threat to innocent seafarers remains in these waters.





With incidents Nigeria recording no in 2022, Ghana and Angola have risen to the top of the list of West African countries reporting piracy incidents. In the Gulf of Guinea in 2022, more than two thirds of the incidents occurred while ships were anchored or berthed, and Takoradi Anchorage, Ghana, and Luanda Anchorage, Angola, were both included in the IMB PRC's list of worldwide "Ports and anchorages with three or more reported incidents in 2022". It is also worth noting that South Africa and Egypt made their first appearance in the IMB PRC's annual report in more than six years.

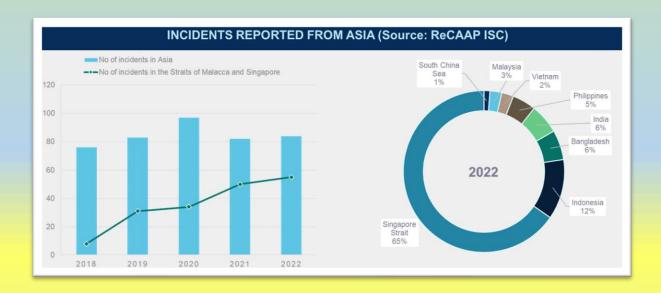
The Indian Ocean High Risk Area (HRA) was removed in January 2023 after several years without any Somali pirate attacks. However, the IMB PRC warns that Somali pirates retain the capability and capacity to carry out attacks in the **Gulf of Aden** region and urges masters to remain vigilant. In a similar manner, the <u>official announcement</u> by the shipping industry to remove the HRA emphasises the importance of continuing to conduct thorough threat and risk assessments, as well as adhering to industry Best Management Practices (BMP), when transiting these waters. The Indian Ocean Voluntary Reporting Area (VRA) managed by the United Kingdom Marine Trade Operations (UKMTO) remains in effect, and vessels entering the VRA are encouraged to report to the UKMTO and register with the Maritime Security Centre for the Horn of Africa (MSCHOA) in accordance with the BMP.





Asia

According to the ReCAAP ISC, 84 incidents were recorded in Asia in 2022, up from 82 in 2021. All but one, a fishing vessel approached by perpetrators in the South China Sea, were classified as armed robbery/petty theft - and the **Singapore Strait** remains Asia's major source of concern.



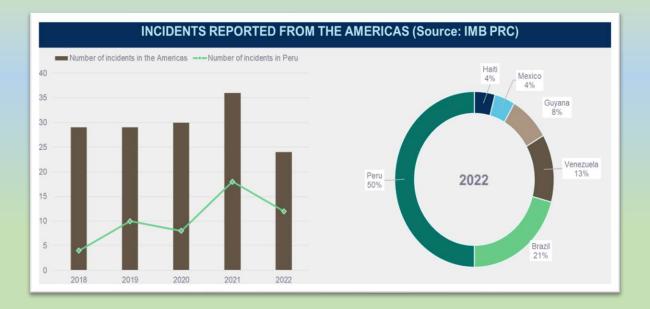
Incidents in the Singapore Strait continued to increase year on year with 55 in 2022 compared to 49 in 2021. The majority of these occurred at night in the Strait's eastbound lane, with bulk carriers being the most frequently targeted ship type. Whilst the incidents were reported predominantly as low-level opportunistic thefts, with little physical injuries to crews, it is not uncommon for the perpetrators to be armed with knives and other weaponlike objects that are used to threaten the crew. In one of the incidents reported in 2022, a crew member sustained a serious injury to his foot after being shot by one of the perpetrators boarding his ship. The negative trend in the Singapore Strait seems to continue into 2023. Ten incidents were reported from ships underway in the Singapore Strait between 1 January and 20 February 2023, and the ReCAAP ISC advises ships to continue to exercise enhanced vigilance when transiting the Strait.



On the positive side, no incidents of abduction of crew for ransom have been reported from the **Sulu-Celebes Seas and Eastern Sabah region** since January 2020 and the Philippine Coast Guard (PCG) has downgraded the related threat level in the area from POTENTIALLY HIGH to MODERATE. The MODERATE threat level as per their orders, implies that 'incidents are possible to occur but are relatively less severe in nature'. As a result, the ReCAAP ISC has updated its <u>advisory</u> to all ships to "consider reroute from the area as an option based on its prerogative". However, masters and crew that do transit the area are strongly encouraged to exercise extra vigilance and report all incidents immediately to the Operation Centres of the Philippines and Eastern Sabah Security Command (ESSCOM) of Malaysia.

The Americas

With a total of 24 piracy and armed robbery incidents recorded in the South and Central America and the Caribbean waters in 2022, the IMB PRC's five-year statistics shows a welcomed improvement for this region, which can be attributed in part to a 33% decrease in reported incidents in Peru's Callao Anchorage in 2022.





However, ports in the South and Central America and the Caribbean, and particularly the **Callao Anchorage**, **Peru** and **Macapa Anchorage**, **Brazil**, continue to be affected by the crime of armed robbery and the perpetrators tend to be armed and violent. According to the IMB PRC, seven crew were taken hostage and six each assaulted and threatened in the region in 2022, making this region quite a risk for crew. The IMB PRC also notes that the majority of incidents reported from this region in 2022 occurred during the hours of darkness and when vessels were anchored.

Stay alert

The level of threat from piracy and armed robbery at sea, as well as the opportunity for and modus operandi of the perpetrators, differs from one region to another and may also change quickly. Prior to entering any piracy prone area, it is important to obtain updated information from local sources and security experts, review the ship security plan in light of the information received, conduct a voyage specific risk assessment, brief and train the crew and prepare and test the ship's emergency communication plans. Relevant preventive measures must be adopted, following available industry guidance and <u>best management practices</u> (<u>BMP</u>). The potential consequences of *not* following industry best practices may be severe when transiting areas prone to piracy.

As ships may be particularly vulnerable when at anchor, ship masters and crew should exercise extra vigilance when staying at high-risk ports/anchorages. Remember that a proper lookout is considered one of the most effective methods of ship protection. It can help identify a suspicious approach or attack at an early stage, allowing defenses to be deployed.



7 Dangerous Diseases/Disorders Seafarers Should Be Aware Of

Working on ships has its perks, but it's also a well-known fact that working at sea is one of the most hazardous occupations, in regards to personal health and safety concerns of seafarers. Apart from accidents, seafarers are prone to certain serious diseases and health hazards due to the nature of onboard work, change in climatic conditions, type of cargo carried, working hours, materials being handled, epidemic and endemic diseases, personal habits etc.



Although seafarers go through a strict medical test before joining a vessel, it is evident that the life of seafarers is constantly at risk while out at sea and what makes it more worse is the lack of professional medical attendance (doctors) on board.







1. Hand Arm Vibration Syndrome (HAVS):

Hand transmitted vibration is one of the major hazards that several seafarers face during their course of work. Operating power tools such as chipping machine (rust bust), needle guns and <u>hand held grinders</u> is the main reason for such syndrome. Frequent and prolonged exposure to such power tools results in hand –arm vibration syndrome and it may lead to permanent disability if not treated in time. The common symptoms of this hazard are tingling of fingers, numbness and blanching and even pain in the arm and wrist. Lack of awareness and improper guidelines on safe limits of usage or exposure to such tools and machinery, along with other factors such as smoking, circulatory problems and improper diet etc. make seafarers more vulnerable to this disease.



Clinical signs of hand-arm vibration syndrome

- Blanched fingers
- Tenderness or pain and swelling of the fingers and forearm tissue
- Paresthesia or tingling in fingers
- Cold intolerance
- Weakness of the finger flexors or intrinsic muscles
- Loss of muscle control
- Reduced sensitivity to heat and cold
- Discoloration and trophic skin lesions of the fingers
- Loss of manipulative dexterity and finger coordination

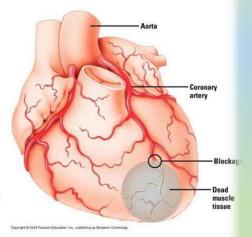


2. Cardio-Vascular Disease (CVD):

Cardio- vascular disease is as commonly found in the seafaring community as in the general population. Various mortality studies have revealed that the percentage of seafarers who die because of cardio vascular diseases is because of common factors which are a combination of genes, age, smoking and other reasons influenced by conditions aboard such as stress, diet, lack of exercise etc. minimum number of crew on board With ships, multitasking, and lack of leisure and recreation facilities, high stress levels are prevalent among seafarers, which is a major cause for Cardio Vascular diseases. Although medicines such as isosorbidedinitrate, glycerol -tirnirate for acute chest pain and metoprolol tartrate, adrenaline, atropine for heart rhythm disorders are available on board, in case of a severe heart stroke, which requires immediate medical assistance, evacuation to the shore becomes difficult or sometimes impossible, posing great risk to the lives of seafarers.

- Cardiovascular disease set of diseases that affect the heart and blood vessels
- $\sim 40\%$ deaths in U.S.
- Heart muscle requires O₂ rich blood to survive
- Coronary arteries branch off of the aorta and supply the heart muscle with O₂
- If a coronary artery becomes blocked the heart tissue without blood will quickly die
- Heart attack failure of the heart to function properly







3. Musculoskeletal Disorder (MSD):

According to a survey conducted by a European based health research facility on board Norwegian and Danish flag offshore vessels mainly (PSV and AHTS), seafarers were reported to suffer from serious disorders related to muscular and skeleton structure of their body. The reason was that as offshore operations are carried out by modern fleets with high end technology and round the clock schedules in all types of weather conditions, many seafarers work on straight 12 hours shift or 6 on 6 off shifts, which leaves them with very less time to do any major physical activities. MSD is a main cause for many seafarers to take longer breaks from sea life, sometimes even leading to disability. As they say prevention is better than cure, exercise and stretching is recommended to prevent Musculoskeletal Disorder. Modern ships have good gym facilities but lack of time and motivation is a great challenge faced.

MSDs	
Signs	Symptoms
 Decreased range of motion Deformity Decreased grip strength Loss of muscle function 	 Pain Numbness Tingling Burning Cramping Stiffness

XK



4. Cancer:

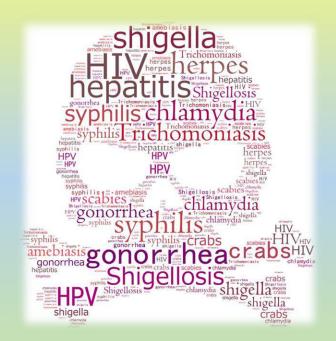
1 out of 8 deaths globally is because of cancer and the scenario is getting worse. As far as seafarers are concerned there has also been a gradual increase in various cases of cancers. The most common among them being lungs cancer, renal Cancer, leukaemia and lymphoma. Even though occupational hazardous such as asbestos, benzene, benzidines are being removed or substituted on ships, new potential carcinogens such as beryllium (used on Product tankers), cadmium, lead etc. have been introduced in to the work place. Officers and crew working on both deck and engine fall prey to this deadly disease due to continuous exposure to such toxic substances. Personnel working on oil, chemical and product tankers are majorly exposed to chemicals and the risk of developing various types of cancer, including brain cancer and leukaemia, is extremely high. Other factors such as smoking, exposure to UV radiation, lack of sleep etc. also aggravate conditions leading to cancer.





5. Sexually Transmitted Disease (STD):

Just like food and water, sex is a basic need of all human beings and seafarers are no different. Traveling to different countries make seafarers vulnerable to sexually transmitted diseases such as HIV/ AIDS and venereal diseases like gonorrhea and syphilis. AIDS is a major concern because it results into serious consequences on both professional and personal life. In recent days, seafarers do not fit the stereo type of having a woman in every port, but owing to long term isolation, lack of leisure and recreation facility and availability of strong sex industry in almost every port of call, seafarers are easily susceptible to unsafe sexual activities and make them a victim of fatal diseases. Creating awareness among seafarers about sexually transmitted disease can minimize and prevent the risk of transmission; however only self-discipline and control can completely eradicate the disease.

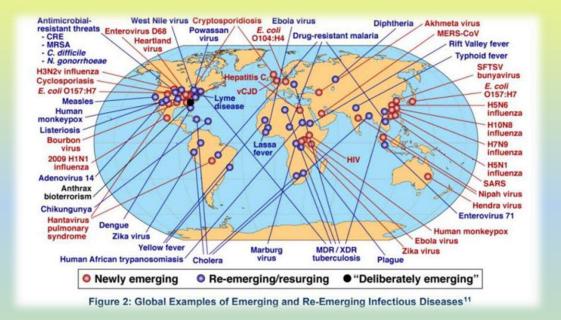




6. Pandemic And Epidemic Diseases:

Because of their nature of work, seafarers are bound to visit many ports in different parts of the world and are thus exposed to various pandemic and epidemic diseases such as malaria, cholera, yellow fever, tuberculosis etc. Seafarers are vaccinated and medically checked thoroughly; however they are in major danger of being exposed to sudden outburst of new diseases in areas they visit. An example can be the recent outburst of EBOLA in West African countries.

The best practice for such situations is to use all preventive measures to contain the spread of contagious diseases on board. The master and the crew should be informed about the diseases before docking and restriction of people embarking the vessel and shore leaves can be effectively controlled to prevent such illness from spreading.

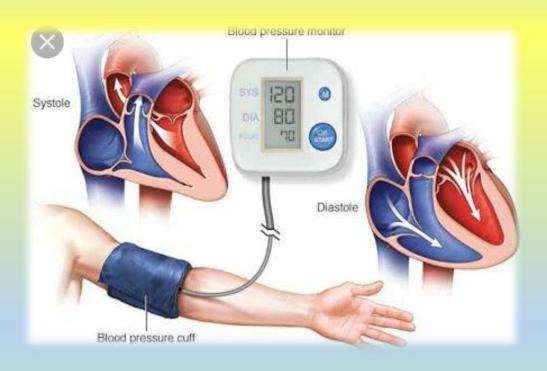






7. Hypertension:

Hypertension is mentioned as one of the major occupation hazards onboard merchant and offshore fleets. Excessive stress, fatigue, loneliness, smoking, consumption of alcohol, lack of physical activity etc. are the main causes for the same. Hypertension can also lead to other illnesses like stroke, renal failure etc. Change in lifestyle and food habits, quitting smoking and alcohol, engaging in physical activities such as exercises, swimming, yoga etc. can reduce hypertension to a great extent.





Biggest Potential Problems For The World's Oceans, Coast, & Marine Life



1. Overfishing

Overfishing can involve fishing <u>total fish population</u> <u>biomass'</u> to the point of decline in an individual fishery. Overfishing might also involve the fishing of certain species past the sustainable population size within a given fishery.

One of the effects of overfishing is that it can threaten and endanger certain species.

Species endangerment or a significant decrease in a species' population can impact the ecosystem and food chain, because one species or type of animal might depend on another to survive, or the endangered species might fulfil specific functions within the ecosystem.

This has a domino effect because the marine ecosystem relies on healthy numbers of organisms and marine life to support one another. Humans also rely on healthy populations of fish and other marine life to make a living from and eat.



In some instances, overfishing can lead to the partial collapse of a fishery.

Two modern examples of overfishing in some fisheries might be the overfishing of bluefin tuna and the orange roughly.

Certain fishing techniques can pull too many fish, or too many non-target fish. By-catching is a separate issue though whereby unwanted marine life is pulled in the nets whilst trying to catch other marine life.

The Food and Agriculture Organization estimates that over 70% of the world's fish species have been entirely exploited or depleted (worldoceansday.ca)



2. Destructive Fishing Practices

Destructive fishing practices may damage or degrade the ocean floor, and important parts of the ecosystem like marine life habitats, coral, and so on

These practices may also have a damaging impact on marine life directly in someway, via injury or death

These practices can relate to how catches are pulled, and sometimes also lost or discarded gear

Bottom trawling and ghost fishing might be two examples of potentially destructive fishing practices

Another example is drag net fishing that can destroy coral, and endanger dolphins and other marine life.



Bottom trawling destroys the sea floor habitat (treehugger.com)

Ghost Fishing is another issue where lost or discarded fishing gear continues to catch fish and other marine life (worldoceansday.ca)

3. Predators Being Killed, & Animals Being Killed For Specific Body Parts

Firstly, catching predators can upset the food chain in the ocean, as predators can help regulate population numbers of animals and organisms lower on the food chain i.e. there can be a domino effect.

Second, killing certain species for only one body part causes the issue of waste, where only the one body part might be used instead of as much of the catch as possible.

Some specific cultures have beliefs around the medicinal, health based, or spiritual based properties of a certain species or body part

Sharks in particular can be killed for their fins (for fin soup) ... and the result is two fold [as sharks can be a predator, but there's also waste]

Certain wildlife are [also] fished for their health benefits of oils.

Whaling can be another issue – whales being killed causes issues in the marine ecosystem elsewhere (worldoceansday.ca).





Bottom trawling destroys the sea floor habitat.

Ghost Fishing is another issue where lost or discarded fishing gear continues to catch fish and other marine life (worldoceansday.ca)

4. Ocean Acidification

The ocean absorbs CO2 emissions from natural sources on Earth.

But, certain human activity also emits CO2 emissions (mainly from the burning of fossil fuels), and the ocean also absorbs this additional CO2.

Ocean acidification happens when seawater absorbs this excess carbon dioxide, and it dissolves in the water.

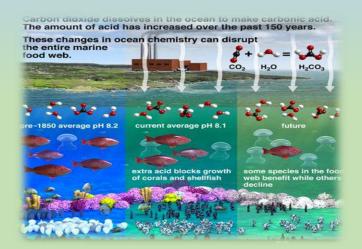
The result is the ocean's average water pH levels getting lower, and it becomes more acidic.

Marine life are at risk if they can't adapt to more acidic conditions

Another contributing factor to ocean acidification can be eutrophication, which is explained below in this guide.

In the past 200 years alone, ocean water has become 30 percent more acidic (ocean.si.edu)

... extra CO2 is being absorbed by the ocean and shellfish, coral and other species are at risk of being threatened and eliminated if they can't adapt quickly enough





5. Coral Dying

Coral helps support small marine life in various ways, such as providing a habitat and a home.

This means coral indirectly supports large marine life and humans, as both rely on small marine life.

One of the potential effects of a changing climate is said to be warming ocean waters.

When waters warm, coral can get stressed or die, and this is known as coral bleaching, as coral can change color.

The nytimes.com indicates that some coral can sometimes recover over the course of a decade or more when the water cools again, but sometimes the effects are irreversible or there is a mass die off.

Coral can also be vulnerable to ocean acidification, landbased pollution that gets into the ocean, and other threats.





6. Ocean Dead Zones, Eutrophication & Algal Blooms

These issues usually happen in coastal areas.

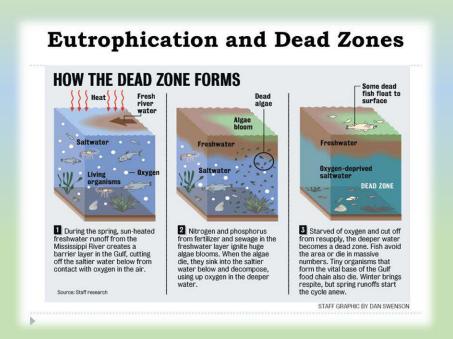
The relationship between dead zones, eutrophication and algal blooms is as follows:

- Eutrophication occurs when excess nutrients, mainly nitrogen or phosphorus, get into the water (a primary cause of this in developed countries is run off from nitrogen and phosphorus based fertilizers used in agriculture, but it can also happen from waste water and industrial waste).

 Excess nutrients in the water leads to accelerated and abundant growth of algae (hence algal blooms) and other aquatic plants.

– Algal blooms can create dead spots and dead zones in the ocean where there a lack of oxygen in those areas. This can happen in several ways, such as algae blocking sunlight, and algae preventing other aquatic life from getting oxygen.

 Algal blooms can be followed by hypoxia, which also relates to a lack of oxygen

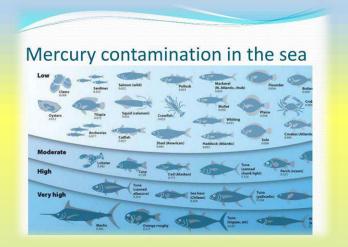




7. Mercury Pollution

Mercury mainly gets into the ocean via the burning of fossil fuels like coal at power plants whereby rain washes it into the ocean, and also from industrial waste effluent (containing heavy metals like mercury) being discharged into rivers and waterways or directly into the ocean

The smallest marine life absorb [mercury], and it works its way up the food chain to fish like tuna, and into humans



8. Waste, Plastic & Garbage Patches

Solid waste can work it's way into the ocean in a number of ways.

It can happen via rivers and waterways, via wind, via directly littering, and even out at sea when fishing gear and materials are dumped into or lost at sea.

One example of solid waste pollution in the ocean is plastic pollution.

Plastic is actually one of the most common waste materials found both on beaches and in the ocean.



Plastic is a material that doesn't naturally decompose in the environment – it can get ingested by wildlife and entangle them.

Plastic also breaks up into micro plastics which are ingested by wildlife.

[Plastic also costs money to remove from the ocean]



9. Irresponsible Fish Farming

There's a number of ways that <u>fish farming at sea</u> can impact the ocean such as:

 Nutrient, chemical, medical, excrement, and other forms of waste pollution.

Escaped fish getting into wild habitats (disease transmission is one such potential side effect)

What some people also aren't aware of is that even fish farmed on land might get a certain % of their fish feed and oils from wild caught fish, so, fish farming currently relies on wild populations.

A few stats about farmed fish production around the world: In China, 90 percent of fish food production comes from aquaculture (2006)

Overall, aquaculture in the marine environment contributes 34 percent of production and 36 percent of total value





10. Offshore Drilling & Mining

There are a number of potential ways offshore mining and drilling for oil and other fossil fuels can impact the ocean, such as ...

When oil is extracted from the ocean floor, other chemicals like mercury, arsenic, and lead come up with it.

... [the] seismic waves used to find oil [may] harm aquatic mammals and disorient whales.

Furthermore, the infrastructure projects to transport the oil often create worse problems, eroding the coastline.





Panama Canal-New rules requiring presentation of document/data as part of carbon neutrality

Advisory to Shipping No. A-12-2023 March 20, 2023

TO: All Shipping Agents, Owners, and Operators **SUBJECT:** Panama Canal Green Vessel Classification

As part of the Panama Canal Green Route Plan 2050 and the Carbon Neutrality Commitment by the year 2030, the Panama Canal Authority (ACP) announces the implementation of the Green Vessel Classification System.

For this purpose, three internationally recognized criteria have been identified: 1) Energy Efficiency Design Index, 2) Bow thruster (horsepower) / Arrival displacement (TSWD) ratio, and 3) Type of fuel. Consequently, as part of the mandatory documentation to be provided by vessels intending to transit, the ACP will require the following information effective May 1, 2023:

1. International Energy Efficiency Certificate (IEEC) and its supplement Record of Construction relating to Energy Efficiency issued by a Classification Society, indicating the Energy Efficiency Design Index (EEDI) which is divided into the energy efficiency index achieved "Attained EEDI" and the required energy efficiency index "Required EEDI". Existing ships must be adapted to meet the IMO-mandated Energy Efficiency Index (EEXI), which is based on a reduction factor expressed as a EEDI reference percentage relative to the level. This information shall be provided through the Maritime Single Window Application (VUMPA, for its acronym in Spanish) and will be verified by the ACP Boarding Officer.

2. Bow thruster (horsepower) / Arrival displacement (TSWD) ratio: This element contributes to the maneuverability of the vessel during the lockage, reducing the emissions from the Canal tugs. A certification from the engine officer indicating the number of operational bow thrusters and their corresponding horsepower available for transit shall be submitted to the ACP.





This information shall be submitted prior to the vessel's first (maiden) transit, and the operational status confirmed for each transit thereafter. This information will be verified by the ACP Boarding Officer.

3. Fuel declaration: In order to validate the use of zero carbon fuels the customer must submit the bunker delivery note (BDN) of the fuel that will be used during transit. This information shall be provided through VUMPA and will be verified by the ACP Boarding Officer.

This information will be used to create a database that will allow the Panama Canal to assess the technical, environmental, and technological characteristics of transiting vessels. Additionally, it will allow the Panama Canal to identify if there are tendencies or trends in the use of certain types of technologies related to maneuverability and efficiency that could impact the operation and concentration of ships at the proposed levels in the actual Green Connection Environmental Recognition Program.

The above-mentioned information shall be provided by all vessels over 38.1 m (125 feet), prior to transit. Warships, dead tows, small craft, and other vessels with less than 1,000 PC/UMS tons or 1,000 tons of displacement are excluded from this requirement.

This initiative is part of the Panama Canal's ongoing commitment to protect the environment and contribute with the international efforts to reduce greenhouse gas emissions.

For additional information regarding this initiative, please contact us at greenconnection@pancanal.com



MSC 107: New SOLAS amendments on lifting appliances and anchor handling winches



The 107th session of the IMO's Maritime Safety Committee (MSC 107), 31 May to 9 June 2023, adopted new requirements in order to improve safety, including new mandatory requirements for lifting appliances and anchor handling winches, and new mandatory requirements for ventilation of totally enclosed lifeboats.

Furthermore, a new Code of Safety for Diving Systems to enhance the safety of divers in fixed and portable diving systems was adopted. Interim guidelines for the safety of ships using LPG fuels were approved, as well as interim guidelines for the safe operation of onshore power supply services in ports. DNV provides an analysis of the key issues discussed as follows:

Meeting highlights

 Adopted new mandatory requirements for onboard lifting appliances and anchor handling winches

Adopted SOLAS amendments to prohibit the use of perfluorooctane sulfonic acid (PFOS) in firefighting foams
Adopted SOLAS amendments to mandate electronic inclinometers for containerships and bulk carriers

 Adopted mandatory navigation and voyage planning requirements for non-SOLAS ships operating in polar waters

 Adopted new mandatory requirements for ventilation of totally enclosed lifeboats

• Adopted STCW amendments to accommodate the use of electronic certificates and documents for seafarers



• Approved a new Code of Safety for Diving Systems, 2023

 Approved interim guidelines for the safety of ships using LPG fuels

• Approved interim guidelines for the safe operation of onshore power supply

 Approved draft amendments to extend the SOLAS requirements for emergency towing devices to all new ships over 20,000 GT

• Approved draft amendments SOLAS and related instruments to enhance the fire safety of ro-ro passenger ships

Onboard lifting appliances and anchor handling winches

The draft new SOLAS Regulation II-1/3-13 requires relevant onboard lifting appliances and anchor handling winches to be designed, constructed and installed in accordance with classification rules or equivalent rules accepted by the flag administration. Associated guidelines for lifting appliances and for anchor handling winches were approved.





Non-certified existing lifting appliances, installed prior to entry into force of the new regulation, are required to be tested and thoroughly examined no later than the date of the first renewal survey on or after 1 January 2026.

The new regulations will enter into force on 1 January 2026.



Electronic inclinometers for containerships and bulk carriers

SAFETY

MSC 107 adopted amendments to SOLAS Chapter V and the certificate forms to mandate electronic inclinometers for the measurement of heel angles for containerships and bulk carriers of 3,000 gross tonnage and upwards. The requirements are not applicable to cargo ships occasionally carrying cargo in bulk and general cargo ships carrying containers on deck. The amendments will enter into force on 1 January 2026.



Ventilation of totally enclosed lifeboats

MSC 107 adopted amendments to the Life-Saving Appliances (LSA) Code to mandate ventilation of totally enclosed lifeboats. A ventilation rate of at least 5 cbm/hr/person should be provided to prevent high CO2 concentrations inside the lifeboat.

MSC 107 also approved consequential amendments to the:

•Revised recommendations on testing of lifesaving appliances" (MSC.81(70)), addressing testing with respect to the new ventilation requirements

•Revised standardized life-saving appliance evaluation and test report forms (survival craft) (MSC.1/Circ.1630/Rev.1)

•Requirements for maintenance, thorough examination and operational testing of LSA (Resolution MSC.402(96))

The LSA Code amendments will enter into force on 1 January 2026 and be applied to survival craft installed on or after 1 January 2029.





The International Maritime Solid Bulk Cargoes (IMSBC) Code

MSC 107 adopted amendment 07-23 of the IMSBC Code. The draft amendments include:

•New individual cargo schedules for celestine concentrate, celestine, crushed granodiorite fines, ground granulated blast furnace slag powder, and magnesite fines

•Alignment of the stabilization requirements for fish meal with the IMDG Code, and classification as MHB (SH) instead of class 9

•Alignment of the IMSBC Code with SOLAS on the declaration of solid bulk density, and a new MSC circular on bringing the issue to the attention of stakeholders

The amendments to the IMSBC Code will enter into force on 1 January 2025.



Electronic certificates and documents for seafarers

MSC 107 adopted amendments to the STCW Convention and Code to accommodate the use of electronic certificates and documents for seafarers.

The amendments will enter into force on 1 January 2025.





Maritime autonomous surface ships (MASS)

MSC 107 progressed the development of the new MASS Code and agreed in principle that the code would apply to SOLAS cargo ships and high-speed craft, and be complimentary to SOLAS and other relevant IMO instruments.

MSC 107 further agreed that the code should contain a riskanalysis-based approach following the structure of MSC.1/Circ.1455 and should utilize suitable risk analysis methods. A definition of "modes of operation" was agreed in principle to determine the conditions of the various functions that, together, safely operate a ship for its intended purpose, noting that the various functions may move between multiple modes of operation.



Interim guidelines for the safety of ships using LPG fuels

MSC 107 approved new interim guidelines for the safety of ships using LPG fuels. The interim guidelines are goal-based and intend to provide provisions for the arrangement, installation, control and monitoring of machinery, equipment and systems using LPG as fuel to minimize the risk to the ship, its crew and the environment.





IGF Code – Safety for Ships using Gases or other Low-flashpoint Fuels

MSC 107 approved draft amendments to the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), based on experience with the code since its entry into force in 2017. The draft amendments are technical and editorial, and relate to:

•Definition of ships constructed on or after 1 January 2026

•Amendments to the provisions for bunkering manifolds and bunkering operations

•Clarification of the requirements related to the capacity of the fuel tank's pressure relief valves

•Clarification of the requirements for control of tank pressure and temperature

•Clarification of the requirements for single fuel installations redundancy and propulsion capability

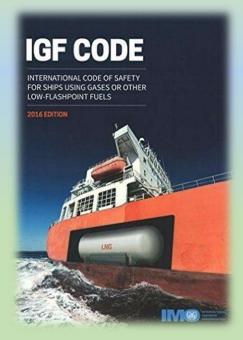
•Clarification of the requirements for the venting of segments upstream of gas consumers

•Clarification of the requirements to design pressure of the outer pipe or duct of fuel systems

•New requirements for portable dry powder extinguishers in the fuel preparation room

•Clarification of the hazardous area zone requirements

The draft amendments are expected to enter into force on 1 January 2026, subject to adoption by MSC 108 (May 2024).





Loss of containers at sea

MSC 107 approved draft amendments to SOLAS Chapter V to mandate reporting of the <u>loss of containers</u>. Consequential draft amendments to the MARPOL Convention to avoid double reporting were agreed and will be submitted to MEPC.



Prohibition of asbestos in the MODU Code

Provisions in SOLAS Chapter II-1 have restricted the use of new materials containing asbestos since 2002 and have prohibited their use since 2011. Unified Interpretations and guidance to SOLAS Regulation II-1/3-5 are available in MSC circulars. The 2009 MODU Code has prohibited the use of asbestos on new units from 2012, but no provisions in the 1979, 1989 or 2009 MODU Codes restrict new installations which contain asbestos on existing units, and no guidance has been available.

MSC 107 approved draft amendments to the MODU Codes to implement the wording and guidance for an asbestos ban on new installations on existing units in the non-mandatory MODU Code in alignment with that contained in SOLAS.

The amendments will be effective on 1 January 2024.





Emergency towing equipment

MSC 107 approved draft amendments to SOLAS II-1/3-4 to extend the SOLAS requirements for emergency towing devices to all new ships over 20,000 gross tonnage to facilitate emergency assistance and towing operations, and thereby reduce the risk of ship wreckage and pollution.

It was further agreed that the Sub-Committee on Ship Design and Equipment should develop a new set of guidelines for emergency towing arrangements on new ships other than tankers.

The draft amendments are expected to enter into force on 1 January 2028, subject to adoption by MSC.







Day of the Seafarer 2023

Day of the Seafarer is an annual celebration organized by the International Maritime Organization (IMO) to recognize the contribution that seafarers make to our everyday lives.

The role of seafarers often goes under-appreciated within the maritime industry and by the general public. Seafarers are an essential component in world trade, keeping the economy moving and delivering the goods and fuels we use every day.

Day of the Seafarer was first held in 2010 following the publication of a revised set of international laws (MLC) which were agreed to ensure that all seafarers receive the same levels of training, general welfare and safety standards.

It is hoped that by holding the Day of the Seafarer, the general public will become more aware of the role that seafarers play in their lives and why they are so fundamental in determining the prosperity of the worldwide economy.



When is Day of the Seafarer 2023?

The Day of the Seafarer 2023 was held on the 25th of June.

The 2023 campaign is centered around protecting the oceans and the marine environment. It is important that those who work out at sea also understand the importance of protecting the oceans and the marine environment. Whether through education and training or through the voyages the seafarers embark on, protecting the oceans and understanding its importance is crucial for its preservation.



Following Markos I departure to another fleet, Marflet Marine S.A. said von voyage to Loukas I which after serve well for almost 18 years has departure our fleet in search of new horizons, Loukas I left Marflet Marine on April 4th, 2023.





Crossing the Bar

Jwilight and evening bell, And after that the dark! And may there be no sadness of farewell, When 9 embark; For though from out our bourne of Jime and Place Jhe flood may bear me far, 9 hope to see my Pilot face to face When 9 have crossed the bar.

Alfred, ford Jennyson

