

Master's Standing Orders

Section 1 Introduction

1.1 Introduction

- These STANDING ORDERS shall not be construed by anyone to indicate a departure from the **Regulations of the Prevention of Collisions at Sea, Navigational Laws of the United States, Regulations for the International Convention of Safety of Life at Sea, or the prudent practices of good seafarership.** Those laws and regulations are to be adhered to at all times during vessel operations. It is essential that officers of the watch appreciate that the efficient performance of their duties is necessary in the interests of the safety of life and property at sea, and the prevention of pollution of the marine environment.

Section 2 General

2.1 General

- The officer of the watch is the Master's representative and their primary responsibility at all times is the safe navigation of the vessel. At all times, they should comply with the applicable regulations for preventing collision at sea.
- It is of special importance that at all times the officer of the watch ensures that an efficient lookout is properly maintained.
- The officer of the watch should stay on the bridge at all times when the vessel is underway unless relieved by a qualified and licensed deck officer.
- The officer of the watch should bear in mind the engines are at their disposal and should not hesitate to use them. The officer of the watch should also know the handling characteristics of the ship, including stopping distances, and should appreciate that other ships may have different handling characteristics.
- The officer of the watch should bear in mind that the sound signaling apparatus is at their disposal and should not hesitate to use it in accordance with the applicable regulations for preventing collision at sea.
- The presence of the master on the bridge does not relieve the officer of the watch of their duties, unless specifically instructed by the Master.

Section 3 Watch Standing

3.1 Watch Standing

- The relieving officer of the watch should ensure that all members of the watch are fully capable of performing their duties, particularly as it regards their adjustment to night vision.
- The relieving officer shall not take over until their vision is fully adjusted to the light conditions and has personally satisfied themselves regarding:
 - A. Standing orders, night orders, or any other special instructions of the Master relating to navigation, or science operations.
 - B. Course, speed, position, and draft of the ship.
 - C. Prevailing and predicted tides, currents, weather, visibility and the effect of these conditions on the vessel.
- The relieving officer shall have a clear understanding of the navigation situation, including, but not limited to the following:
 - A. Operational condition of all navigation and safety equipment being used or likely to be used during the watch.

- B. Errors of the gyro and magnetic compass.
- C. Presence or movement of ships in sight or known to be in the vicinity.
- D. Conditions and hazards likely to be encountered during the watch.
- E. Possible effects of heel, trim, water density, and squat on under keel clearance.
- F. Active radio frequencies and call in points if in a traffic scheme.
- If at the time the officer of the watch is to be relieved, a maneuver or other action to avoid any hazard is taking place, the relief of the officer shall be deferred until such action has been completed.

3.2 Watch Standing Personal

- The officer of the watch should give watch standing personnel all appropriate instructions and information that will ensure the keeping of a safe watch including an appropriate lookout.
- All watch standers shall observe the STCW Work/Rest requirements. If for any reason, a watch stander is exceeding their hours they should notify the Master to arrange for a relief.

3.3 Calling the Master

- The officer of the watch should notify the Master immediately in the following circumstances.
 - A. If restricted visibility is encountered or expected.
 - B. If traffic conditions or the movements of other ships are causing concern.
 - C. If difficulty is experienced in maintaining course.
 - D. On failure to sight land, a navigation mark is sighted, or a change in soundings do not match the course.
 - E. If unexpectedly, land or a navigation mark is sighted, or a change in soundings occurs.
 - F. On the breakdown of the engines, steering gear, loss of propulsion, or any essential navigation equipment.
 - G. In heavy weather or if doubt about the possibility of weather damage.
 - H. If the ship meets any hazard to navigation, such as ice or derelicts.
 - I. In any other emergency or situation in which they are in doubt.

3.4 Navigation in Restricted or Congested Waters

- Congested waters are, by definition, areas where a vessel transiting through has a high volume of marine traffic. This can include:
 - A. Deep draft commercial vessels.
 - B. Fishing vessel, either deploying or towing gear.
 - C. Pleasure craft
 - D. Naval vessels operating in a fleet formation, or conducting training.
- Restricted waters are any area where there is an inherent inability to maneuver the vessel without significant risk of ground or collision.
- In both these situations it is important to remember the officer of the watch can, if needed, call out the second AB of the watch to serve as an additional lookout.
- At all times, the officer of the watch needs to be especially vigilant of vessel traffic and navigational hazards that may come into play during maneuvering the vessel.
- Reducing speed in these situations is always an option.
- If at any time the officer of the watch feels the situation is escalating or they are in doubt of any action by an opposing vessel they should immediately call the Master.

3.5 Navigation when a Pilot is aboard.

- If the officer of the watch is in any doubt as to the pilot's actions or intentions, they should seek clarification from the pilot. If doubt still exists, they shall notify the Master immediately and take whatever action is necessary before the Master arrives.

3.6 Navigation in Coastal Waters.

- The ECDIS is still the primary means of determining position and navigation of the vessel. If the ECDIS is unavailable, the largest scale chart onboard, suitable for the area and corrected with the latest information should be used. Fixes should be taken at frequent intervals. Whenever circumstances allow, fixing the vessel's position should be carried out by more than one method.
- The officer of the watch should positively identify all relevant navigation marks.

3.7 Navigation in Clear Weather

- The officer of the watch should take frequent and accurate compass bearings of approaching ships as a means of early detection of risk of collision. Such risk may exist even when an appreciable bearing change is evident, particularly when approaching a very large ship or tow, or when, or when approaching a ship at close range. The officer of the watch should also take early and positive action in compliance with the applicable regulations for preventing collisions at sea and subsequently check that such action is having the desired effect.

3.8 Navigation in Restricted Visibility

- When restricted visibility is encountered or expected, the first responsibility of the officer of the watch is to comply with the relevant rules or the applicable regulations for preventing collision at sea, with particular regard to the sounding of fog signals, proceeding at a safe speed, and having the engines ready for immediate maneuvers. In addition they should:
 - A. Inform the Master.
 - B. Post a proper lookout and helmsperson, and in congested waters, revert to hand steering.
 - C. Exhibit navigation lights.
 - D. Operate and use the radar.
- It is important that the officer of the watch should know the handling characteristics of the ship, including its stopping distance, and appreciate that other ships may have different characteristics.

3.9 Watch Standing While at Anchor.

- A continuous navigational watch shall be maintained at anchor. In all circumstances, while at anchor, the officer of the watch shall:
 - A. Determine the anchor position and swing of the vessel on the ECDIS as soon as practical.
 - B. When circumstances permit, check at sufficiently frequent intervals whether the ship is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects.
 - C. Ensure that an efficient lookout is maintained.
 - D. Ensure that inspection rounds of the vessel are periodically maintained.
 - E. Observe meteorological and tidal conditions, and the state of the sea.
 - F. Notify the Master and undertake all necessary measures if the ship drags anchor.
 - G. Ensure that the state of readiness of the main engines and other machinery is in accordance with the Masters instructions.
 - H. If visibility deteriorates, notify the Master and comply with the applicable regulations for preventing collision at sea.

- I. Ensure that the ship exhibits the appropriate lights and shapes, and the appropriate sound signals are made at all times, as required.
- J. Take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations.

3.10 Science Operations.

- The officer of the watch shall have a comprehensive understanding of what science operations are taking place on their watch. This will include:
 - A. An understanding of all environmental factors that could have an effect on the vessel.
 - B. An understanding of required and requested CPA's of opposing traffic that may be encountered during the operation.
 - C. How the vessel is performing when the Dynamic Positioning System is being utilized.
- The officer of the watch shall have a direct line of communication between the deck, winch operator and computer lab. If using UHF radios for this communication the batteries should be checked at least once a watch.
- The Master has the final decision on whether or not a science operation can begin. If there is any doubt concerning weather conditions or safety of the vessel and crew the officer of the watch should notify the Master.
- If either of the transducer stems are deployed a minimal speed shall be established, the officer of the watch is expected to maintain equal to or below the defined speed.

3.11 Operations in Ice, or in the IMO Polar Regions.

- The Polar Regions are defined as any area the vessel is operating in below 60° South Latitude and latitudes north of the IMO designated Polar Region.
- The overall objective of this section is to:
 - A. Prevent any type of ice encountered while operating in or near the Polar Regions from coming in contact with the vessel.
 - B. Provide a procedure for operating in or near the Polar Regions.
 - C. Clarify any confusion regarding what constitutes navigation in or near ice
- The officer of the watch is expected to notify the Master when:
 - A. Any type of ice is first sighted.
 - B. Any relevant emergency.
 - C. If while operating in or near the ice there is a significant change in wind direction or ice conditions.
 - D. Ice concentration increases to over four-tenths coverage.
 - E. Ice accretion begins to form on the vessel.
 - F. At any time, the officer of the watch has any doubt or confusion over the safety of the vessel, science operations or the protection of personnel.
- Prior to arriving in the Polar Regions, the Master will conduct a briefing with all members of the bridge watch to cover potential hazards that may be encountered while transiting or operating within the designated Polar Regions.
- Ice accretion shall be monitored continuously whenever the air or sea temperature is near 32° Fahrenheit.
- Notify the Engine Room when the sea temperature drops to 34° Fahrenheit.
- The officer of the watch shall maintain entries in the Ice Observation Log; entries shall be made once a watch if no ice is encountered, and hourly if ice is encountered.

- During periods of sub-zero temperatures, no crewmember or scientist shall access the weather decks without permission from the officer of the watch.
- The officer of the watch shall closely monitor all environmental factors including sea temperature, sea state, and visibility. If there is a significant change in any of these elements, notify the Master immediately.
- All navigation equipment should be maintained in operational status at all times while operating in or near the ice.
- It is important to remember that accurate soundings and detailed hydrography, together with usable navigation information is scarce in most parts of the Polar Regions. Therefore, the officer of the watch must be prepared to cross check any and all information.
- At no time shall the vessel enter an ice field where the concentration is greater than 3/10th coverage.
- It is of the utmost importance that the officer of the watch prevent any and member of the navigation watch prevent any ice from coming in contact with the hull of the vessel. The officer of the watch shall have full control of the maneuvering of the vessel in the ice and should not hesitate to alter course or decrease speed if ice is detected.
- While operating in areas where it is believed ice may be present, the officer of the watch must be extremely vigilant in their observations. If necessary, reduce speed of the vessel to 3.0 knots to allow greater time to evaluate the situation.
- A continuous lookout must be maintained at all times when ice is encountered, this includes both physical presence (if necessary call out the second AB of the watch), and by electronic means which would include Radar, Depth Sounder, and NVG's. The officer of the watch will be primary lookout.
- The ship's position should be monitored regularly while in coastal waters or inside known ice limits. The position should be corroborated by use of the echo sounder whenever possible.
- Backing down in ice is extremely difficult and could expose the Z-Drives to potential danger. If the officer of the watch feels they must back down make sure there is no ice in the path of the vessel, when in doubt call the Master.
- The magnetic compass should be tested for accuracy at least once a watch.

Section 4 Navigation Equipment

4.1 Periodic Checks of Navigation Equipment

- Operational tests of shipboard navigational equipment should be carried out at sea as frequently as practicable and as circumstances permit, in particular when hazardous conditions affecting navigation are expected. Where appropriate, these tests should be recorded.
- The officer of the watch should make regular checks to ensure that:
 - A. The helmsperson or the automatic pilot is steering the correct course.
 - B. The standard compass error is determined at least once a watch, and when possible, after any major alteration of course.
 - C. The standard and gyro compasses are frequently compared, and repeaters are synchronized with their master compass.
 - D. While in automatic pilot, manual steering is tested at least once a watch.
 - E. The navigation and signal lights and other navigational equipment are functioning properly.

4.2 Automatic Pilot

- The officer of the watch should bear in mind the necessity to comply at all times with the requirements of regulation 19 Chapter V of the International Convention for the Safety of Life at Sea, 1974. They should take into account the need to station the helmsperson and to put the steering into

manual control in good time to allow any potentially hazardous situations to be dealt with in a safe manner. With a ship under automatic steering, it is highly dangerous to allow a situation to develop to the point where the officer of the watch is without assistance and has to break the continuity of the lookout in order to take emergency action. The changeover from automatic to manual steering and vice-versa should be made by, or under the supervision of, a responsible officer.

4.3 Electronic Navigation Aids

- The officer of the watch should be thoroughly familiar with the use of electronic navigational aids carried, including their capabilities and limitations.
- The echo sounder is a valuable navigational aid and shall be used whenever appropriate.

4.4 RADAR

- The officer of the watch shall use the radar when appropriate and whenever restricted visibility is encountered or expected, and all times in congested waters having due regard to its limitations.
- Whenever radar is in use, the officer of the watch should select an appropriate range scale, observe the display carefully, and plot effectively.
- The officer of the watch should ensure that range scales employed are changed at sufficiently frequent intervals so the echoes are detected as early as possible.
- It should be borne in mind that small or poor echoes might escape detection.
- The officer of the watch should ensure that plotting or systematic analysis is commenced in ample time.
- In clear weather, whenever possible, the officer of the watch should utilize the radar.

4.5 ECDIS

- The ECDIS is not to be used as the primary navigational tool during collision avoidance or maneuvering. Rather it should be used in conjunction with the RADAR's, and AIS along with visual bearings.
- The ECDIS should always be maintained on a scale appropriate for the safe navigation in the waters the vessel is operating. The scale used should never be so small as to impair the safe navigation of the vessel.
- The officer of the watch is expected to use the ECDIS to its full operational capability. If there is an alteration in the voyage plan, it is expected that a change and evaluation of any new courses happen.

Section 5 Additional Orders

5.1 Ballasting

- The Master must approve all ballasting, de-ballasting, transfers and exchanges.
- Sound ballast practices will be maintained in accordance with state and federal laws or the laws established by foreign countries.
- The officer of the watch is responsible for recording ballast water operations in the "Ballast Water Log" the following information shall be included:
 - A. Time and Date of starting (local time).
 - B. Time and date of completion (local time).
 - C. Latitude and Longitude, or port and berth of starting.
 - D. Latitude and Longitude, or port and berth of completion.
 - E. Salinity measured in parts per thousand.
 - F. Specific Gravity.

- G. Water Depth.
- H. Seawater temperature.
- I. Distance from land.
- J. Final amount.

- An appropriate entry shall also be made in the Deck Log which includes:
- Time of starting and completion.
- Latitude and Longitude of starting and finishing.
- The tank that is being ballasted, de-ballast, exchanged or transferred.
- Final status of the tank(s).
- The officer of watch shall coordinate and be in good communication with the engineer conducting the ballasting.
- Any alarm received from the Ballast Water Treatment System must:
- Be recorded in the Deck Log Book
 - A. Be recorded in the Ballast Water Log Book
 - B. The officer of the watch notify the Master

5.2 Internal Fuel Transfers

- With the exception of filling the day tanks, no internal transfer of fuel shall take place without the authorization of the Master.
- All policies set forth in **section 7.2.6** of the SMM are in effect. In accordance with this policy the officer of the watch shall be responsible for:
 - A. "The Deck Duty officer shall ensure that the oncoming watch officer and crew is aware of the status of the operation."
 - B. "The Deck Duty officer shall inform the two unlicensed deck personnel of their required initial tasks in an emergency and the location of the spill equipment"
 - C. "The Deck Duty officer shall maintain communication with the deck unlicensed personnel during the fueling operation."
 - D. "The Deck duty and Engineering officer should be familiar with the Fueling Plan and brief the unlicensed personnel on his/her watch. The unlicensed personnel shall be assigned duties to assist the fueling and prevent pollution."
- An appropriate entry shall be made in the Deck Log indicating the starting and stop time, then starting and stopping latitude and longitude, and the final amount transferred.

5.3 Use of Cell Phones, and Computers While Standing a Bridge Watch.

- Personal phone calls on a Cell/Smart phone or any other electronic device is strictly prohibited by any crew member who is standing a watch.
- Use of social media or texting on a Cell/Smart phone, or any other electronic device is strictly prohibited by any crew member who is standing a watch.
- Phone calls and texting pertaining to vessel operations may be permitted while a crew member is on watch, however these phone calls should be kept to a minimum time limit.
- Use of computers (laptop, desktop, or tablets) may be used for ships business, however the officer of the watch and bridge team must not let this work impede their primary responsibility of standing the navigation watch.
- At no time will the internet be used for personal reasons while standing watch.
- If at any time, you need to use an electronic device for personal reasons contact the Master for a proper relief.

5.4 Heavy Weather Procedures at Sea

- The officer of the watch shall closely monitor increasing weather. If at any point while on station or transiting the vessel begins to labor in the sea, has increasing amounts of boarding seas, or an increase in power limits the Master shall be notified and Heavy Weather Procedures set. The officer of the watch shall take any and all precautions to ensure the safety of the vessel prior to setting Heavy Weather Procedures.
- Once Heavy Weather procedures are set the officer of the watch shall:
 - A. Place notifications at each access point to a weather deck.
 - B. Inform the Duty Marine Technician, and Main Control Room.
 - C. Make a general announcement over the vessel's public address system (if needed).
 - D. Make an appropriate entry in the Deck Log Book denoting the time and location Heavy Weather Procedures were set. Include Time and location.
- Once Heavy Weather procedures are set, the officer of the watch shall make weather entries to the Deck Log Book on an hourly basis.
- The course and speed of the vessel shall be adjusted to minimize the motion of the vessel. An appropriate course line will be established on the ECDIS, adjustment to the ECDIS will be made as the weather condition
- The Master is the only one who can cancel Heavy Weather Procedures.

5.5 Heavy Weather Procedures in Port

- Weather reports while in port should never be ignored or dismissed. If there is the threat of inclement weather precautions should be taken well in advance. Prudence is the best security in dealing with heavy weather while in port.
- The officer of the watch shall closely monitor increasing weather while the vessel is in port. Special attention should be paid to:
 - A. Backing and veering winds.
 - B. Increasing wind.
 - C. Observed lightning that can be identified as local.
 - D. Increase in swell or surging while at the dock.
 - E. Heavy rain.
- The officer of the watch shall add or double up mooring lines, and constantly check the lines to ensure tension and integrity.
- If lightning is observed in the area all work on the weather decks shall be secured and personnel should seek shelter within the vessel until the storm has passed.
- The engineer on watch should be notified of the increase in weather. The engineer of the watch should carry with them a radio to maintain communication with the deck watch. If needed they should be able to assist with mooring lines.
- The officer of the watch shall if needed raise or secure the gangway, however if this is done the deck watch shall maintain a presence at the accommodation area to assist with vessel personnel leaving or arriving on the ship.
- The deck watch will secure any loose gear on the deck, and weathertight doors.
- The engineer of the watch should plan to secure any sewage or potable water lines.
- If the weather increases to a point where the vessel is in danger of parting lines, or breaking free of the dock, the officer of the watch shall:
 - A. Notify the duty engineer for immediate propulsion. This will include the Bow Thruster and both Z-Drives.
 - B. Notify the Master.

- C. Make appropriate call outs as needed, this may include additional AB's and Mate's.
- During periods of heavy weather while in port the officer of the watch shall make hourly weather entries in the deck log.
-