

Circular From UK
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Operating In Conditions of Heavy Weather

With reports of operators directing ships through the Straits of Magellan and round The Cape of Good Hope in order to save on canal dues and take advantage of the suppressed fuel prices, a reminder to Masters of the considerations that should be taken into account when operating in areas of adverse weather conditions.

When considering whether it is safe to allow crew on deck in conditions of heavy weather the Master must first ask himself whether the work (or task) to be carried out is necessary to preserve the safe operation of the ship. If the answer is “no” then it may be sensible to delay this work until the vessel reaches calmer waters.

If work on deck is deemed absolutely necessary then it is imperative that all ISM safety processes and procedures are implemented, including a full risk assessment and associated permit to work and checklist for work on deck in heavy weather, as per the vessel’s Safety Management System.

The Code of Safe Working Practices for Merchant Seaman (CoSWP), the internationally accepted authority on safe working practices on board ships, should also be consulted.

Code of Safe Working Practices for Merchant Seaman (CoSWP) - Edition 2019, Chapter 11.12

Adverse weather

11.12.1 If adverse weather is expected, lifelines should be rigged in appropriate locations on deck.

11.12.2 No seafarers should be on deck in conditions that the master considers adverse weather unless it is considered necessary for the safety of the ship, passengers and crew, or the safety of life at sea. Where possible, work should be delayed until conditions have improved, e.g. until daylight, or until the next port of call.

11.12.3 The lashings of all deck cargo should be inspected and tightened, as necessary, when rough weather is expected. Anchors should be secured and hawse and spurling pipe covers fitted and sealed when rough weather is expected, regardless of the expected voyage duration.

11.12.4 Work on deck during adverse weather should be authorised by the master and the bridge watch should be informed. A risk assessment should be undertaken, and a permit to work and a company checklist for work on deck in heavy weather completed.

11.12.5 Any seafarers required to go on deck during adverse weather should wear a lifejacket suitable for working in, a safety harness (which can be attached to lifelines) and waterproof personal protective equipment including full head protection, and should be equipped with a water-resistant UHF radio. Head-mounted torches should be considered.

11.12.6 Seafarers should work in pairs or in teams. All seafarers should be under the command of a competent person.

11.12.7 Use of stabilising fins (if fitted) to reduce rolling, and adjusting the vessel's course and speed should be considered to mitigate the conditions on deck. If possible, visible communication should be maintained from the bridge, but if not other continuous communication should be maintained.

In order to minimise time on deck in heavy weather, all stores and spares should be properly secured prior to leaving or as soon as possible after sailing from port, even where no heavy weather is expected. Ensure all cargo lashings are inspected on a daily basis and tightened as necessary, anchors are properly secured and the spurling pipes are closed and waterproofed.

Some Case Studies involving incidents on deck during conditions of heavy weather

Incident #1: Man overboard

While transiting the North Sea in heavy weather, the Chief Engineer notified the Master of leaking water of the engine room emergency escape hatch cover on the aft mooring deck into the steering flat. The hatch cover was secured on from the inside with chain blocks. But there was concern the coiled mooring lines on the aft deck may have become loose. The Master visibly (from a safe stairwell) confirmed loose nylon mooring ropes adjacent to the hatch cover. At this point he became concerned if the nylon lines were washed overboard, they may become entangled in the ship's propeller.

The Bosun and an AB volunteered to go on deck to secure the lines. The Master's plan had them both donning life jackets and a safety harness, with fire fighters lifelines attached to the harnesses and the other ends to handrails on two external stairwells. Slack in the lifelines would be manually taken up by the Master and another AB on one stairwell, and the Chief Officer and the Chief Engineer on the other.

As the Bosun and the AB proceeded with the work, a large wave on the aft mooring deck washed both men overboard, causing all four crew manually holding the lines to lose their grips. As a result, the lifelines parted and the two crew were adrift in the heavy seas. Unfortunately, the sea condition made the option of turning vessel around too dangerous, and both men were lost.

Lessons Learnt:

- No heavy weather checklist was available, and none required as part of the vessel's safety manual
- Master underestimated the potential wave height that could be expected in the prevailing weather conditions

- Strength of the firefighters
- lifeline was insufficient to withstand the strong wave that washed the crew members overboard
- No appropriate strength lifelines were available on the vessel
- Master overestimated the strength of the lifelines and the ability to manually control their loading under these conditions

Incident # 2: Unsecured empty cans on deck

Soon after departing San Juan, Puerto Rico, on route to Port Elizabeth, New Jersey, the subject ship prepared for heavy weather predicted to hit the next day. The winter storm was a large system affecting most of the US Eastern Seaboard. The Master issued a list to the deck department of items to be secured on deck, or moved to safer quarters. There was no mention of trash cans.

Early morning on the third day at sea, the Master secured the deck at 06:30hrs due to the heavy weather conditions restricting crew members access. At 09:00hrs he instructed the Chief Officer to secure garbage cans inside a newly acquired 20 foot container placed on deck. There were also several empty cans on deck strapped to a cradle that were to be re-stowed in the container. (The ship had no trash incinerator or compactor, so garbage was placed in cans in the container, for discard at next port.)

The Chief Officer, Bosun, and two ABs started their task as the weather began to deteriorate. The door to the container was opened and latched with a small chain over a slightly bent 1 ° inch hook. The Chief Officer soon sent one of the ABs to get rope to better secure the open door. The Bosun and the other AB were inside the container securing the cans. The Chief Officer was concerned the door would slam shut so he left the container to check the latch. As he did so, the door swung free knocking him into a bulwark stiffener beam. He suffered serious injuries to his ribs and back. He was later medevac'd during increasing winds and seas. There were two other minor injuries to crew members in the galley and a stateroom.

Lessons Learnt:

- Was the deck work absolutely necessary for the safety of the ship and crew?
- A Risk Assessment meeting should have taken place prior to the task on deck
- No heavy weather checklist was available, and none required as part of the vessel's safety manual
- This work should have been done prior to the storm or prior to leaving the last port, when other securing on deck was performed
- Improper security of container door latching. Door should have had rope tie back for better safety.

Incident #3: Communication failure

This ship departed Portugal on a winter afternoon headed to Houston, full away at 02:00hrs. The anchors were secured at 02:15hrs.

Three days later in the evening, the Chief Officer ordered the Bosun and an AB to retighten the securing lines on the anchors, which were heard contacting the ship's hull when seas struck the bow. During the

rest of the night, moderate seas deteriorated to heavy weather, alarming the Chief Engineer, who reduced the speed of the ship about 01:30hrs. The Master was awakened about 04:20hrs due to the ship's heavy pitching. He went to the bridge to check on the weather and agreed with the officer on watch, Chief Officer, to further reduce the speed. The Master remained on the bridge for several hours in which he discussed with the Chief Officer the possibility of checking conditions forward for the safety of the vessel and securing the anchors. Nothing was agreed upon at that time. The Master returned to the bridge as the Chief Officer handed over the watch to the Third Officer at 08:00hrs.

At 08:20hrs the Bosun and two ABs were seen waiting for the Chief Officer, who had advised them they were to check the securing lines on the port and starboard anchors. Two additional seaman arrived, and the six men went forward onto the forecastle. They split up to tighten the lines on the anchors. At 08:40hrs two waves struck the ship so forcibly, the ship shook violently. As the vessel pitched into the first wave, one seaman was able to rush behind a deck tank and grab hold of ventilator trunk. He survived with minor injury. The other men were slammed by the two waves and strewn across the forecastle deck about 20meters aft. The Chief Officer died, and an AB died later after rescue from the deck by his shipmates. The other ABs thrown by the waves suffered severe injuries.

Lessons Learnt:

- The Master did not give orders for the on deck work, nor was he aware of the Chief Officer's intentions
- The Officer of the Watch- Third Officer- was not notified, so the bridge being unaware of the on deck presence of crew did not take navigational precautions to lessen the force of the heavy seas
- Although an experienced deck officer, the Chief Officer underestimated the weather reports, despite the obvious sea conditions at the time, and warnings from other crew members
- There was no evidence that any crew members were wearing safety harnesses
- No Risk Assessment meeting was held as the Master and the bridge personnel were completely unaware of the presence of crew on deck, there was no ability to assist the men immediately
- There was no indication that the anchor securing needed urgent attention at the time the Chief Officer elected to perform the task.

Source of Information: The UK P&I Club