

Maersk checklist - Heavy Weather



Checklist - Heavy Weather

A.P. Moller Group ID:416 - 18/09/2007 - 02 - 6 months

Vessel: M/V Kithira

Date: 23-Sep-2008

A vessel specific heavy weather checklist shall be available onboard all vessels to facilitate an efficient "making ready for sea" check on departure from port, bound for an ocean passage, when expecting adverse weather between coastal ports, or when the weather deteriorates while on route the inclusion of items below shall be considered and the shipboard management shall, thoroughly and well in advance, compose their own checklist with all appropriate check items

Item	
Weather routing and forecasts scrutinised	<input checked="" type="checkbox"/>
Heavy Weather maneuvering characteristics known and consulted	<input checked="" type="checkbox"/>
Personnel instructed and familiar with available means for heavy weather response	<input checked="" type="checkbox"/>
Loading condition - (e.g. GM, stress, tank shoving, immersion of propeller, freeboard)	<input checked="" type="checkbox"/>
Container stacking adjusted for ocean passage	<input checked="" type="checkbox"/>
Container lashings rechecked/ tightened	<input checked="" type="checkbox"/>
Hatchcover locking devices rechecked	<input checked="" type="checkbox"/>
Anchors properly lashed and brakes engaged	<input checked="" type="checkbox"/>
Dampers for ventilation on forecastle closed	<input checked="" type="checkbox"/>
Ventilation for bowthruster closed	<input checked="" type="checkbox"/>
Dampers for ventilation of cargo holds closed (reefer cargo holds exempted)	<input checked="" type="checkbox"/>
Lashings on mono-rail crane rechecked	<input checked="" type="checkbox"/>
Stores, equipment etc. stowed on deck secured	<input checked="" type="checkbox"/>
Store room forward checked and additional lashings applied as necessary	<input checked="" type="checkbox"/>
Paint locker checked and all paint secured	<input checked="" type="checkbox"/>
Steering gear room checked and additional lashings applied as necessary	<input checked="" type="checkbox"/>
Engine room checked and additional lashings applied as necessary	<input checked="" type="checkbox"/>
Watertight doors closed	<input checked="" type="checkbox"/>
Portable gangway properly secured	<input checked="" type="checkbox"/>
Pilot ladders and hoists properly secured	<input checked="" type="checkbox"/>
Chief Steward notified and provision room and gallery prepared for rough weather	<input checked="" type="checkbox"/>
Furniture and appliances in Dining Saloon secured	<input checked="" type="checkbox"/>
Furniture and appliances in Duty Mess secured	<input checked="" type="checkbox"/>
Furniture in Officers Smoking Room secured	<input checked="" type="checkbox"/>
Furniture in Crew's Dayroom secured	<input checked="" type="checkbox"/>
Furniture in Conference Room secured	<input checked="" type="checkbox"/>
Additional lashings on PC monitors, copy machines and printers	<input checked="" type="checkbox"/>
Deck control room prepared for rough weather	<input checked="" type="checkbox"/>
Bridge prepared for rough weather	<input checked="" type="checkbox"/>
If rolling exceeding 30 degrees the engine room to be manned	<input checked="" type="checkbox"/>
Crew instructed about any restrictions in work outside accommodation	<input checked="" type="checkbox"/>
Anchors and bow thruster vents closed after sailing Yantian	<input checked="" type="checkbox"/>
C/O Round on decks after sailing	<input checked="" type="checkbox"/>

Master:

(signature) 1630/2308



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Master:

(signature) _____

Injury or fatality following waves washing onboard vessels
as recorded in MAIB database 1998 – 2001

Annex B

MAIB accident database records of injuries and fatalities to crew working on deck in heavy weather when a wave washed inboard.
(Accidents occurring on board merchant vessels of 500gt or more of UK flag or in UK waters)
1998 – 2007

No	Ship Type	Injuries	Fatalities	Remarks
1	Tanker	2	0	Bilge alarm in Bow thruster compartment sounded. Chief officer and deck crew went forward to investigate. Ventilators and hatch tightened and crew returned to accommodation. Chief officer and bosun delayed due to closing the forecastle door. As they moved aft they were hit by a wave.
2	Rig supply	2	0	During a lull in operations, two ratings were sent on deck to check spaces for damage. While on deck they were hit by a large wave and both sustained injuries. The master had used the pre-briefed whistle signal to warn of the approaching wave, and the two men had been trying to take cover when the wave hit.
3	Dive support vessel	1	0	A well operations supervisor went onto the main deck for some fresh air and was struck by a large wave. He was not found for some time since he had not told anyone he was going on deck.
4	Dredger	1	0	Ship making passage in rough weather, though ship's motion was relatively easy. Two ABs sent on deck to close ventilation covers which were letting in water. On completion, the ABs were returning to the accommodation when a wave washed on board, knocking one of the men into the ship's side rails.
5	Ro-Ro cargo	1	0	Ship was hove to in heavy weather. Three ABs were sent on deck to inspect the forecastle, when a large wave washed on board.
6	Container	1	0	Crewman stumbled as he crossed the deck avoiding water washing on board.
7	Passenger	1	0	While entering a door from the forecastle, a crewman got his leg caught in the door when the door was struck by a wave.

8	Container	1	0	Chief officer carrying out routine rounds in rough weather, left the underdeck passageway to check outside, when he was hit by a wave which washed him along the deck.
9	Tanker	2	0	Two crewmen injured while working on deck by a wave washing inboard.
10	Container	1	0	A crewman was carrying out rounds of the reefer containers, when a wave broke over the bow. The water surged along the deck, knocking the man against the steelwork.
11	General cargo	1	0	When weighing anchor, the chief officer was hit by a wave breaking over the forecastle.
12	Container	0	1	Crew member was washed overboard from the pilot door opening in the hull. He was never recovered.
13	Container	3	1	With the ship moving easily, four crewmen were working forward. A large sea broke over the bow, washing three of the men into the iron work on the deck.
14	Passenger	1	0	Vessel operating in heavy seas, pitched heavily. Seas shipped on board burst open a weathertight door. The water rushing into the passageway knocked a crewman over, injuring him.
15	Tanker	1	2	Tanker leaving port with men completing the securing of the forecastle after letting the tug go. Vessel pitched and shipped two large waves over the bow. This resulted in the deaths of two seamen and serious injury to a third.
16	Safety standby vessel	1	0	After a stormy night, OOW noticed loose equipment on deck. Crew were sent to secure the same, and as they were coming off deck, the vessel shipped a sea, washing the seaman against a bulkhead.
17	General cargo	2	0	Two crew members went on deck to secure equipment. Unexpected large wave washed on board, throwing both men against the accommodation bulkhead.

Amended SJA entitled "Movement on Deck in Heavy Weather"



MAERSK

Safe Job Analysis

SJA Title

Authorising Officer

Assessor:

DECK - MOVEMENT ON DECK IN HEAVY WEATHER

crew member 1

crew member 2

Location(s):

Creation Date:

location 1

29/01/2009

Wave on deck				
Hazard Effect	Consequence		Probability	Risk
Wash overboard/being submerged/drowning	Involving a serious injury or fatality (C4)		Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Control Measures				
Description	Responsible Person	Consequence	Probability	Residual Risk
Manoeuvring/reducing speed to ease the ship	Master	Involving a serious injury or fatality (C4)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Use lifejackets/immersion suits	Chief Officer	Involving a serious injury or fatality (C4)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Only use sheltered passage	Chief Officer	Involving a serious injury or fatality (C4)	Unlikely, less than average i.e. easy to hypothesize an incident but unlikely (P3)	12
Only daylight operations	Master	Involving a serious injury or fatality (C4)	Unlikely, less than average i.e. easy to hypothesize an incident but unlikely (P3)	12
Use lifelines	Chief Officer	Involving a serious injury or fatality (C4)	Highly unlikely, would require multiple failures of systems and controls (P2)	8
Prohibition to go on deck	Master	Negligible injury (first aid) (C1)	Highly unlikely, would require multiple failures of systems and controls (P2)	2

Wave on deck				
Hazard Effect	Consequence		Probability	Risk
Being washed against/submerged/drowning	Involving a serious injury or fatality (C4)		Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Control Measures				
Description	Responsible Person	Consequence	Probability	Residual Risk
Manoeuvring/reduce speed to ease the ship	Master	Involving a serious injury or fatality (C4)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Use of safety lines	Chief Officer	Involving a serious injury or fatality (C4)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	16
Use PPE	Chief Officer	Involving a serious injury or fatality (C4)	Unlikely, less than average i.e. easy to hypothesize an incident but unlikely (P3)	12
Only daylight operations	Master	Involving a serious injury or fatality (C4)	Highly unlikely, would require multiple failures of systems and controls (P2)	8
Prohibition to go on deck	Master	Negligible injury (first aid) (C1)	Highly unlikely, would require multiple failures of systems and controls (P2)	2

Accelarations

Hazard Effect	Consequence	Probability	Risk
Slips, trips and falls	Injury leading to RWA or LTA (C3)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	12
Control Measures			
Description	Responsible Person	Consequence	Residual Risk
Use safety lines	Chief Officer	Injury leading to RWA or LTA (C3)	12
Use PPE, proper footwear	Chief Officer	Injury leading to RWA or LTA (C3)	6

Water on deck

Hazard Effect	Consequence	Probability	Risk
Slips, trips and falls	Injury leading to RWA or LTA (C3)	Possible, i.e. the event may have occurred and represents a credible scenario (P4)	12
Control Measures			
Description	Responsible Person	Consequence	Residual Risk
Use of PPE/proper footwear	Chief Officer	Injury leading to RWA or LTA (C3)	6

Moving/falling objects

Hazard Effect	Consequence	Probability	Risk
Being hit by	Involving a serious injury or fatality (C4)	Unlikely, less than average i.e. easy to hypothesize an incident but unlikely (P3)	12
Control Measures			
Description	Responsible Person	Consequence	Residual Risk
Sea secure everyrthing/use heavy weather check list	Chief Officer	Involving a serious injury or fatality (C4)	16
Prohibition to go out on deck	Master	Negligible injury (first aid) (C1)	2

Safe Job Analysis Authorisation

This SJA has been authorised by crew member 1

Signature :

Date :

Maersk Safety Flash 01/2009



SAFETY FLASH 01/2009

Movement/Inspections on deck during heavy weather

Issued by: SQHE Department, Copenhagen dated January 30th, 2009

Event description:

The following unfortunate incident occurred on board one of our vessels end of last year.

Vessel departed from a port where a typhoon was approaching. Heavy weather checklist was run through and signed off. Weather situation outside was windforce 8/9 with a slightly rolling and pitching vessel.

A few hours after departure, around 20.00 LT, due to a bilge alarm in the bosunstore, the C/O & C/E went up forward via the underdeck passageway to inspect the cause of the alarm.

Vessel altered course to give a leeway and to steady the movement, and speed was also reduced. This gave a leeway to starboard side where the entrance from the under-deck passageway is situated.

It appeared to the C/O's and the C/E's that there was a leakage from the forward store hatch. The C/O & C/E informed the bridge that the situation forward seemed favourable enough and that they would assess on deck whether the weather would allow further securing of the hatch once the vessel was steadied.



Once the vessel was steadied for about ten minutes, both the C/E and C/O made the decision to go up to the maindeck entrance, which is situated some 15 metres aft of the gulfbreaker on the foc'sl, to check out the weather circumstances.

As the weather was considered favourable from there, it was decided to go up forward to tighten the dogs of the hatch. After completing the task, both men intended to go back to the entrance of the lower passageway, when they noticed that the S/B anchor lashing (ocean lashing) had become slack as well.

The C/E climbed on the pedestal where one end of the securing was situated, and the C/O remained on deck to assist.

Busy with securing the ocean lashing, a green sea came over the foc'sl deck and both men were washed off their feet, with the C/E lying under the SB winch drum. Both the C/O and C/E were heavily wounded and requested assistance.



Unfortunately after all due medical care, the C/E passed away the following night as a result of the internal wounds which he had sustained during the incident.



Recommended on board actions:

- Review/create new and if necessary revise the SJA "Movement on Deck during Heavy Weather" to include lessons learnt from incident.
 - Departure checks should be reviewed, especially when heading into rough weather.
 - Emphasise onboard the importance of a Risk Assessment prior to tasks involving hazards.
 - Assess whether it really is necessary go out on deck during bad weather
 - Avoid inspections on deck during dark hours
 - If circumstances make it necessary to go on deck, make sure that the vessel is heading in such a direction that 'green water' cannot be encountered.
 - If inspection is found necessary, determine reporting intervals/times/periods via handheld radio's
 - A third man should be over viewing the inspection team from a safe point
 - Consider the use of the right PPE, also making use of lifelines.
 - The equipment on deck should be kept well maintained and in good working order so as to prevent water ingress in the foeship (forecastle, forepeak, hold no.1) following heavy weather damage to closing appliances and/or deck structures.
 - All members of the work party should take the opportunity to identify further hazards and controls.
-
- **If there is any change that may alter the hazards and controls, the work party must STOP work and the prevailing risks must be reviewed. This can then be reflected in the revisions to the relevant SJA.**



The exposed forecastle deck, of course is especially vulnerable, where:

- All closing appliances for openings into the hull should be subject to regular inspection and maintenance, particularly when trading in waters where heavy weather may be expected.
- Locking devices for access hatches and doors should be kept in good working order so that unintended opening, due to green seas, is greatly reduced.
- Condition and clamping devices of air and sounding pipes should also be subject to regular follow-up by the ships crew, as internal corrosion and inadequate clamping may turn out to be critical.
- Anchor lashings should be inspected for tightness each day, when safe to do so.

Recommended shoreside actions:

- Review the Heavy Weather Procedures as in the GSMS
- Reintroduction of the Emergency Response Manual, taking this incident into account.
- Review the need for additional medical training for sea staff on top of the STCW requirements.

Please discuss this Safety Flash and attached investigation report at your next Safety Committee Meeting. This Safety Flash must be filed according to procedure ID: 260 and be posted on board the vessel for 6 months.