

IRISL MTI

Oral Exam Tips



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SOLAS 1974



- Regulation-7 to chapter XI-1 of SOLAS 1974, is adopted at 94th session of the maritime safety committee by resolution 380(94) requiring every ship to which chapter I applies to carry an appropriate portable atmosphere testing instrument or instruments.
- As a minimum, these shall be capable of measuring concentrations of **oxygen, flammable gases or vapours, hydrogen sulphide** and **carbon monoxide** prior to entry into enclosed spaces.
- **Instruments carried under other requirements may satisfy this regulation (Refer to SOLAS II-2/4.5.7.1).**
- Suitable means shall be provided for the **calibration** of all such instruments.

SOLAS 1974



- A new paragraph 3.3 to the SOLAS regulation III/19 (**Emergency training and drills**) with an entry-into-force date of **1 January 2015**, requiring that **each enclosed space entry and rescue drill shall include checking and use of instruments for measuring the atmosphere in enclosed spaces.**

PSC Concentrated Inspection Campaign (CIC)



- Is a watch schedule posted in an easily accessible area?
- 2. Is the ship manned in accordance with MSMD or an equivalent document?
- 3. Are there records of daily hours of rest for each watch keeper?
- 4. Have the records in Qu 3 been endorsed by an appropriate person?
- 5. Are records related to hours of rest being recorded correctly?
- 6. Do rest periods for all watchkeeping personnel comply with
- STCW requirements, including the weekly requirements of rest?
- 7. Will the watchkeepers on the first and subsequent watch after
- departure have sufficient time to rest?
- 8. Is there evidence that on-call seafarers receive adequate, compensatory rest periods if disturbed by call-outs to work?
- 9. Do the records indicate that a bridge lookout is being maintained?
- 10. Was the ship detained as a result of this CIC?

SOLAS Amendments



1. Code of noise levels on board ship; July 2014, applies to ship delivered on or after July 2018.
2. Reg III/17-1 require ships to have plans and procedures to recover persons from water, as well as related guideline for developing of plans and procedures to recover persons from water.
3. Reg II-2/10 require a minimum of duplicate two way portable radiotelephone apparatus for each fire party of fire fighters. Ship constructed after July 2014
4. Reg II-2/15 require an onboard means for recharging breathing apparatus cylinder used during drills, or suitable number of spare cylinders. Ship constructed after July 2014
5. Format of following certificates changed: cargo ship SAFCON, Safety equipment, safety radio

AMENDMENTS TO MARPOL ANNEX I MARPOL

- The carriage of approved stability instruments with capability of damage stability verification mandatory by resolutions MEPC.248(66), MEPC.249(66) and MEPC.250(66) respectively, expected to enter into force on 1 January 2016.
- All oil and chemical tankers shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements approved by the administration.

2013 Amendments to ISM code



6 – Resources and personnel

6.2 now is in two part

6.2.1 no change

6.2.2 Appropriately manned in order to encompass all aspects of maintaining safe operations on board.

12- Company verification review and evaluation

New paragraph 12.2 is added

12.2 The company should periodically verify whether all those undertaking delegated ISM related tasks are acting in conformity with the company's responsibilities under the code.

Amendments to the international regulations for preventing collisions at sea, 1972



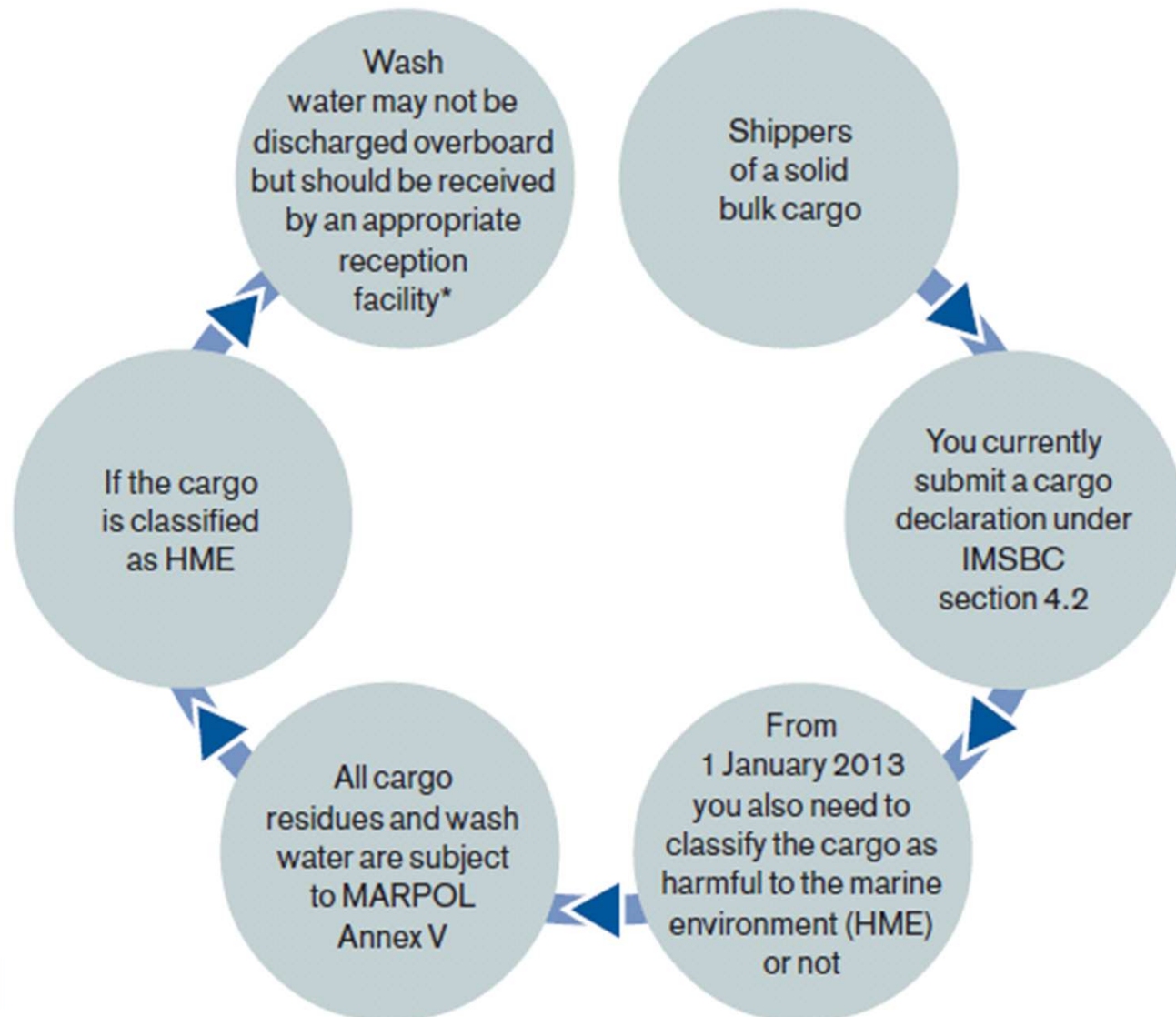
After existing part E (Exemptions), a new part F is added to read as follows:

PART F: Verification of compliance with the provisions of the Convention

- **Rule 39 ;** *Definitions : Audit , Audit Scheme , Code for Implementation , Audit Standard .*
- **Rule 40;** *Application*
Contracting Parties shall use the provisions of the Code for Implementation in the execution of their obligations and responsibilities contained in the present Convention.
- **Rule 41;** *Verification of compliance*
 - a) Every Contracting Party shall be subject to periodic audits by the Organization in accordance with the audit standard to verify compliance with and implementation of the present Convention. ..
 - b), C), d)

New amendments to MARPOL Annex V

Outside Special Areas the discharge of HME cargo residues contained in hold wash water is allowed, under certain predefined conditions, until 31 December 2015.



New amendments to MARPOL Annex V



Discharge of cargo residues contained in wash water:

- 1- No discharge of cargo residues should occur less than 12 nautical miles from the nearest land, or the nearest ice shelf.
- 2- No discharge of cargo residues should occur within the six MARPOL defined 'Special Areas³' (the Mediterranean, the 'Gulfs' area, the wider Caribbean including the Gulf of Mexico, the Baltic Sea, the North Sea and the Antarctic).

New amendments to MARPOL Annex V



- The discharge of cargo residues contained in wash water is only permitted if both the destination and departure ports are within the Special Area and the ship will not transit outside the Special Area between these ports, and only provided that no adequate reception facilities (RF) exist.
- In such instances discharge of non-recoverable, non-HME cargo residues in hold wash water should take place as far out to sea as is practicable and, in any event, no less than 12 nautical miles from the nearest land or the nearest ice shelf.
- 3- No discharge of any cargo residues specified as HME. Hold wash water should be discharged to a suitable reception facility.

New amendments to MARPOL Annex V

predefined conditions, until 31 December 2015



- Based on the information from the relevant port authorities, the master determines that there are no adequate RFs at the receiving terminal or at the next port of call.
- The ship is en-route and as far as practicable (but at least 12 nautical miles) from the nearest land.
- Before washing solid bulk cargoes are removed (and bagged for discharge ashore) as far as practicable (and the holds swept).
- Filters are used in the bilge wells to collect any remaining solid particles.
- The discharge is recorded in the garbage record book with the flag state notified utilizing the revised consolidated format for reporting alleged inadequacies of port reception facilities stated in MEPC.1/Circ.469/Rev.2.

New amendments to MARPOL Annex V



- From 1 Jan 2015 the shipper should provide a complete classification for the cargo to be shipped.
- The shipper must also declare whether the cargo is HME or not to the port state authorities in the port of loading and unloading.
- As per IMSBC section 4.2; The shipper shall provide the master or his representative with appropriate information on the cargo sufficiently in advance of loading to enable the precautions which may be necessary for proper stowage and safe carriage of the cargo to be put into effect.

Example Shippers Declaration

This form meets the requirements of SOLAS 1974, Chapter VI, Regulation 2 and the IMSBC code, section 4.2.

General Information

Shipper:	Transport document number:
Consignee:	Carrier:
Name/means of transport:	Instructions and other matters:
Port/place of departure:	
Port/place of destination:	

Cargo Information

General description of the cargo (for solid bulk cargo – type of material / particle size):	Relevant special properties of the cargo (eg highly soluble in water. For solid bulk cargo, see section 4 of the IMSBC code):
Gross mass (Kg/tons)	
General cargo:	
Cargo units:	
Bulk cargo:	

Solid Bulk Cargo Information

BCSN:		
Specification of bulk cargo (if applicable): Stowage factor: Angle of repose: Trimming procedures: If potential hazard – chemical properties (Class, UN number or MHB):		Group of the cargo Group A: ☐ Group B: ☐ Group A and B: ☐ Group C: ☐
Transportable moisture limit:	Moisture content at shipment:	Additional certificate(s) (if required) Certificate of moisture content and transportable moisture limit: ☐ Exemption certificate: ☐ Weathering certificate: ☐ Other: ☐
EHS (see chapters 2.10 and 2.9.3 of the IMDG code): Yes / No		
Marine Pollutant (HME) (see MARPOL Annex V): Yes / No		
Note: All 7 criteria must be available by Jan 1 st 2015		

Declaration

I hereby declare that the consignment is fully and accurately described and that the given test results and other specifications are correct to the best of my knowledge and belief and can be considered as representative for the cargo to be loaded.		
Name / status, Company / organisation of signatory:	Place and date:	Signature on behalf of shipper:

Type of garbage	Ships outside special areas	Ships within special areas	Offshore platforms (more than 12 nm from land) and all ships within 500 m of such platforms
Food waste comminuted or ground	Discharge permitted ≥ 3 nm from the nearest land, on route and as far as practicable	Discharge permitted ≥ 12 nm from the nearest land, on route and as far as practicable	Discharge permitted
Food waste not comminuted or ground	Discharge permitted ≥ 12 nm from the nearest land, on route and as far as practicable	Discharge prohibited	Discharge prohibited
Cargo residues ¹ not contained in wash water	Discharge permitted ≥ 12 nm from the nearest land, on route and as far as practicable	Discharge prohibited	Discharge prohibited
Cargo residues ¹ contained in wash water		Discharge permitted ≥ 12 nm from the nearest land, on route, as far as practicable and subject to two additional conditions ²	Discharge prohibited
Cleaning agents and additives ¹ contained in cargo hold wash water		Discharge permitted ≥ 12 nm from the nearest land, on route, as far as practicable and subject to two additional conditions ²	Discharge prohibited
Cleaning agents and additives ¹ in deck and external surfaces wash water	Discharge permitted	Discharge permitted	Discharge prohibited
Carcasses of animals carried on board as cargo and which died during the voyage	Discharge permitted as far from the nearest land as possible and on route	Discharge prohibited	Discharge prohibited
All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse	Discharge prohibited	Discharge prohibited	Discharge prohibited
Mixed garbage	When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply		

Pollution prevention – documents required for ships



1. Shipboard Oil Pollution Emergency Plan (SOPEP)

- (a) all ships more than 35m in length overall; and
- (b) ships more than 24m in length overall if carrying oil as cargo or if there is a vehicle onboard carrying more than 400L of oil as cargo.

2. Oil Record Book Part I

- a) shall be provided to every oil tanker of 150 gross tonnage and above and every ship of 400 gross tonnage and above, other than oil tankers, to record relevant machinery space operations.

3. Oil Record Book Part II

- a) shall also be provided for oil tankers, to record relevant cargo/ballast operations.

4. Ship-to-ship oil transfer operation plan

- a) oil tankers of 150 gross tonnage and above and will require any oil tanker involved in oil cargo STS operations to have, on board, a plan prescribing how to conduct STS operations (the STS Plan), which would be approved by its Administration.

Pollution prevention – documents required for ships



5. International Oil Pollution Prevention Certificate

- a)** after an initial or renewal survey in accordance with the provisions of regulation 6 of Annex I, to any oil tanker of 150 gross tonnage and above and any other ships of 400 gross tonnage and above which are engaged in international voyages.

5(a). Supplements to the International Oil Pollution Prevention Certificate (IOPP Certificate)

- a)** Form A Record of of construction and equipment for ships other than oil tankers.
- b)** Form B Record of of construction and equipment for oil tankers.
- c)** These Records shall be permanently attached to the IOPP Certificate.

6. Record of oil discharge monitoring and control system for the last ballast voyage

- a)** Every oil tanker of 150 gross tonnage and above shall be fitted with an oil discharge monitoring and control system approved by the International Maritime Organization.

Pollution prevention – documents required for ships



7. Dedicated Clean Ballast Tank Operation Manual

- a) Every oil tanker operating with dedicated clean ballast tanks in shall be provided with a Dedicated Clean Ballast Tank Operation Manual detailing the system and specifying operational procedures.

8. Crude Oil Washing Operation and Equipment Manual (COW Manual)

- a) Every oil tanker operating with crude oil washing systems shall be provided with an Operations and Equipment Manual detailing the system and equipment and specifying operational procedures.

9. Oil Discharge Monitoring and Control (ODMC) Operational Manual

- a) Every oil tanker fitted with an Oil Discharge Monitoring and Control system shall be provided with instructions as to the operation of the system in accordance with an operational manual approved by the International Maritime Organization.

Noxious liquid substances in bulk



- 1. Procedures and arrangements manual**
- 2. Shipboard marine pollution emergency plan for noxious liquid substances**
- 3. Cargo Record Book**
- 4. International Pollution Prevention Certificate for the carriage of noxious liquid substances in bulk**
- 5. Dangerous goods manifest or stowage plan**
- 6(a). Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk (chemical tankers constructed before 1 July 1986)**
- 6(b). International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk (chemical tankers constructed on or after 1 July 1986)**
- 7. Certificate of Fitness for the Carriage of Liquefied Gases in Bulk**
- 8. International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk**

Gas carriers constructed on or after July 1986.

Packaged harmful substances



- 1. Certificate or declaration**
- 2. List and location of harmful substances on board, or a detailed stowage plan which sets out the location of the harmful substances on board.**
- 3. Dangerous goods manifest or stowage plan**

Sewage



- 1. Shipboard Sewage Management Plan**
- 2. Sewage Disposal Record Book**
- 3. System Documentation, System Service Manual and Service Records**
- 4. International Sewage Pollution Prevention Certificate**

To be kept by ship engaged in an international voyage and is either:

- 400gt or more, or
- less than 400gt and certified to carry more than 15 persons ('prescribed ship').

Garbage



- **Garbage Management Plan**
- **Garbage Record Book**
- Every ship of 400 gross tonnage and above, and every ship which is certified to carry 15 persons or more

Insurance



1. Copy of certificate of insurance to be kept on board.

a) For ships more than 15 metres in length overall and that are operating in coastal waters

2. Certificate of insurance or other financial security in respect of civil liability for oil pollution damage

a) A certificate attesting that insurance or other financial security is in force is required by ships carrying more than 2,000 tons of oil in bulk as cargo

A storm is heading your way, what are you going to do?

- 
- 1) Clear the decks, remove anything that can block the freeing-ports
 - (2) Put anything that can be placed below decks, below
 - (3) Switch on Navigation lights
 - (4) Check everything that cannot be placed below is securely fasten down
 - (4) Switch on the radar(s) and tune them in, (One on 12 miles and the other on 6 mile scale)
 - (5) Double up the watches
 - (6) Have an engine-room watch
 - (7) Check every compartment regularly
 - (8) Track the way the storm is moving, if in the Northern Hemisphere, the lows usually go in a North East direction
 - (9) Listen to all shipping forecasts
 - (10) Close up to another vessel and contact him, and try and dodge alongside him
 - (11) If there is any large vessels in the area, take shelter on his leeward
 - (12) If possible, take shelter off any high coastline, as long as the wind is blowing from the land to the sea, don't shelter if the wind is blowing from the sea to the land
 - (13) Check to see where your spare wheelhouse windows are (incase a wave breaks the original window)
 - (14) Be very cautious about Rogue/freak waves, even very large ships have disappeared without trace because of these, records have shown a wave 30 metres high breaking over an oil-rig in the North Sea

Crew missing before sailing



- Check **gangway** register.
- Quick **search** in accommodation, E/R and other places in the ship where he may be found.
- Call the **person who went ashore** with him and ask.
- Inform **agent** and ask him to check all suspicious places as **hospitals, police station, seamen's club, night clubs etc.**
- **Inform different party:** Owner-MPA-Local port authority-P&I club-Charterer)-Local police
- Make a list of his **personal belongings** and money.
- **Sign him off** from AOA
- Make an entry in **OLB**
- Fill up form ENG-2A
- Make his final **wages account**
- Give him **discharge certificate**
- All those things to be **handed over to agent**
- Keep the receive copy from agent.
- Check **safe manning doc** and check if the ship is able to sail without him.
- If ship is unable to sail, check from juniors if somebody have certificate, give him promotion after consult with dept head and owner.
- **Keep an eye to the jetty** up to departing for the last moment of his arrival.
- Do a thorough **search** of the accommodation for **any suspicious** items he kept onboard.

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Crew complaints



- Note down the complaints in official log book.
- Make statement of fact of each crew members with their signature.
- Elect a committee, members consisting of a crew from each department.
- Investigate all the allegations with the committee members.
- Make known the outcome of the investigation via an emergency gathering meeting.
- Rectify the problems as soon as possible, giving the completion date for the next follow up.
- Keep notes of all the proceedings, investigations, with proofs and photographs.
- Inform the office about the outcome.
- If the crews are not satisfied with the actions taken, inform the office.
- If the crews want to complain to the director, inform office and arrange so in the next suitable opportunity.

Damage in FO tank as a result of grounding

SOPEP to be activated:

- Transfer fuel from damaged tank to other tank.
- Report to the appropriate authority.
- Obtain shore's assistance to control spillage.
- Contain by booms/ mooring ropes, if the situation permits, by rescue boat.
- Use oil dispersal upon shore's permission.
- Clean up oil if situation permits.

Damage in FO tank as a result of grounding

In case of oil spill or FO tank damage, there is a subsequent risk of fire:

- Prepare fire fighting teams ready to fight fire.
- Remove all combustible materials from the scene.
- Fight fire if there is any.

Repair of damage:

- Proceed to [port of refuge](#) or next port for repair.
- Follow [port of refuge procedures](#).
- Gas free the tank.
- Shift cargo/ combustible materials from adjacent tanks and holds.
- Prepare fire fighting equipments to fight probable fire.

Lower lifeboat in heavy weather condition



Preparation

- Some steadying method to be used so that the life boat does not land hard against the ship side.
- Prevent the fall blocks to hit ship crew or lifeboat.
- Boat crews must wear life jacket, helmet, and immersion suit in cold climate for rescuing operation.
- [Sea quelling oil](#) may be used to reduce the seas.
- Vessel to create a good lee. Wind to be on the opposite bow.
- Ship plugs.
- Lower lifeboat into the trough of a wave.
- On the next rising crest, release the hooks immediately and simultaneously.
- Cast off the painter once clear.
- Bear off the ship's side with tiller, oars or boat hook.
- Engine is started before the release of blocks and kept neutral.
- Once lifeboat is underway, tiller put against ship's side and with full throttle clear off the ship.

Lower lifeboat in heavy weather condition



- **Precautions**

- Rig fenders, mattresses or mooring ropes to prevent the boat from being staved during an adverse roll.
- A cargo net, slung between davits and trailing in the water for crew to hang on in case the boat capsize alongside. It should not hamper the operation of the boat.
- The painter is rigged and kept tight throughout so as to keep the boat in position between the falls.
- The falls are loosely tied with a line, led to the deck and manned. When the boat is unhooked, the line will steady the falls and prevent accidental contact with the boat crews.
- Once unhooked, the blocks should be taken up to avoid injuring the crews in lifeboat.

PRINCIPLES OF FIRE PROTECTION ONBOARD



- Division of the ship into main vertical and horizontal zones by thermal and structural boundaries.
- Separation of accommodation spaces from the remainder of the ship by thermal and structural boundaries.
- Restricted use of combustible materials.
- Detection of any fire in the zone of origin.
- Containment and extinction of any fire in the space of origin.
- Protection of means of escape and access for fire fighting.
- Ready availability of fire extinguishing appliances.
- Minimization of possibility of ignition of flammable cargo vapor.

Discharge Engine Room bilge



- Discharge as per [MARPOL regulations](#).
- Ship is not in [special areas](#).
- Ship is en route (making way).
- Distance is more than 12miles from nearest coast.
- ODME is operational.
- Bilge is passed through oily water separator and ODME.
- Oil content in water is less than 15ppm.
- I will consider these and advise the engineer accordingly.

Fire regulations



- **International shore connection:**
- Required for ships 500GT and upwards. At least one.
- [Specifications](#) as per FSS code. Can be used on either side of the ship.
- **Fire pumps:**
- Ships shall be provided with independently driven fire pumps. Cargo ships: 1000Gt and upwards: At least two.
- Others: At least two (one independent).
- An emergency fire pump for cargo ships and passenger ships less than 1000GT, if fire in any compartment cause all the pumps inoperative.
- **Fire hoses and nozzles:**
- Non perishable material. At least 10m length. Not more than 15m in machinery space.
- Not more than 20m in other spaces and open decks.
- Not more than 25m for open decks for ships with max breadth more than 30m.
- Complete interchangeability of hose, couplings and nozzles, unless one hose and nozzle for each hydrant is provided.
- For cargo ships 1000GT and upwards, 1 for every 30m and 1 spare (not less than 5).

Annex VI : Prevention of Air Pollution from Ships



- Set limits on sulphur oxide (SO_x) and nitrogen oxide (NO_x) emissions from ship exhausts and prohibit deliberate emissions of ozone depleting substances.
- Includes a global cap of 4.5% m/m on the sulphur content of fuel oil and calls on IMO to monitor the worldwide average sulphur content of fuel once the Protocol comes into force.
- Provisions allowing for special "SO_x Emission Control Areas" to be established with more stringent control on sulphur emissions. In these areas, the sulphur content of fuel oil used on board ships must not exceed 1.5% m/m.
- Ships must fit an exhaust gas cleaning system or use any other technological method to limit SO_x emissions.
- The Baltic Sea is designated as a SO_x Emission Control area.

Annex VI : Prevention of Air Pollution from Ships



- Prohibits deliberate emissions of ozone depleting substances, which include halons and chlorofluorocarbons (CFCs).
- New installations containing ozone-depleting substances are prohibited on all ships.
- New installations containing hydro-chlorofluorocarbons (HCFCs) are permitted until 1 January 2020.
- Sets limits on emissions of nitrogen oxides (NO_x) from diesel engines. A mandatory NO_x Technical Code, developed by IMO, defines how this is to be done.
- Also prohibits the incineration on board ship of certain products, such as contaminated packaging materials and polychlorinated biphenyls (PCBs).

Discharge of oil as per Annex-1



Processed bilge water generated from machinery spaces of tankers (150 GT and above) and cargo ships (400GT and above) are allowed to discharge if following conditions are met:

- Ship is not in [special areas](#).
- Not generated in pumproom.
- No oil residue mixed.
- Ship in en-route.
- Oil content not more than 15ppm.
- Ship has operational oil filtering equipment.
- Automatic stopping device fitted to ensure not more than 15ppm oil discharge.

Danger message as per SOLAS, CH-V, Reg-31



The master of every ship which meets the following

- Dangerous Ice.
- Dangerous Derelict.
- Any other direct danger to navigation.
- A TRS
- Encounter sub freezing air temperature associated with gale force wind causing ice accretion.
- Winds of force 10 or above for which no warning has been received.
- Is bound to communicate the information by all means to all ships & the costal authority.
- Form is not obligatory, may be in plain language (preferable English) or by ICS.

OIL RECORD BOOK

Contents

Contents of part-1

- Ballasting or cleaning of fuel oil tanks.
- Discharging of dirty ballast and cleaning water.
- Disposal of oil residues (sludge).
- Discharge overboard / disposal of machinery space bilge.

Contents of part-2

- Loading, discharging and internal transfer of cargo.
- Ballasting of cargo tanks and dedicated CBT (clean ballast tank).
- Cleaning of cargo tanks including COW (crude oil washing).
- Discharge of ballast from COT and CBT. (Not SBT- segregated ballast tank).
- Discharge of water from slop tanks.
- Closing of valves after slop tanks discharge.
- Closing of valves to isolate dedicated clean ballast tanks from cargo and stripping lines.
- Disposal of residues.

SOPEP Contents



- The procedures to be followed by master (over all in charge) to report an oil pollution incident.
- The list of persons or authorities to be contacted in the event of an oil pollution incident.
- A detailed description of the action to be taken immediately by persons onboard to reduce or control the discharge of oil following the incident.
- The procedures and point of control on the ship for coordinating shipboard action with national and local authorities in combating the pollution.
- List of oil pollution equipments and their location.

Master standing order

Calling master as per STCW-95



- If restricted visibility is encountered or expected.
- If traffic conditions or movements of other ships are causing concern.
- If difficulty is experienced in maintaining course.
- On failure to sight land, a navigation mark or obtain soundings by the expected time.
- If, unexpectedly, land or a navigation mark is sighted or change in sounding occurs.
- On the breakdown of the engines, steering gear, or any essential navigational equipment.
- In heavy weather, if in any doubt about the possibility of weather damage.
- If the ship meets any hazard to navigation, such as ice or derelicts.
- In any other emergency or situation in which the OOW is in any doubt.

STCW Requirement chief officer Responsibilities



- Familiarization training
- Basic training
- Watch arrangement and Rest hours for watch keeping officers and crews.
- To conduct familiarization training for new joining crew before being assigned to duties to familiar with shipboard equipment, operating procedures of various equipments.
- To conduct basic training for watch keeping, safety and environment protection, emergency procedures.
- To prepare onboard training programs for crew, cadet including junior officers. Example: Rigging pilot ladder. Understanding helm orders. Duties while berthing and un-berthing. Basic knowledge of deck maintenance and tools used on deck.
- To monitor on their progress and skills and documented in training record books.
- To maintain rest hours for watch officers and crews forming part of watch as per STCW-95.
- To maintain the ship and equipment properly and ready for port state control inspection.

Preparation for anchoring



- Appropriate personnel with helmet, goggles, torches to be sent forward.
- Both the anchors to be cleared away.
- Check the windlass is working properly.
- Anchor being used to be lowered to [cockbill](#).
- Anchors to be used alternately.
- The brake is screwed and windlass is taken out of gear.

Choice of anchorage

various factors



- Draft of the vessel. Depth of water. Nature of seabed.
- Any obstruction on the seabed.
- Tide, tidal stream, direction and rate.
- Shelter from heavy weather, sea, swell.
- Security of the vessel.
- Length of stay.
- Purpose of anchoring, eg, cargo operation, repair, transferring of persons.
- Traffic density.
- Distance from shore.
- Size of vessel.
- Loaded/ballast condition.
- Type of cargo.
- Requirement of port.

Amount of cable to use several factors



- Nature of the holding ground. (Stiff clay, rock, shells and stones are poor holding ground. Mud can be a good holding ground.)
- Amount of swinging room available for the ship as the wind or stream changes direction.
- Degree of exposure to bad weather in the anchorage.
- Strength of wind or stream. As it increases, the ship moves stern. The cable is lifted from the bottom and it becomes [long stay](#).
- Duration of stay at the anchorage.
- Type of anchor and cable.
- Length of mild steel cable may be taken approximately $25\sqrt{D}$ (D is depth of water).

Cares of anchors chain



- Wash regularly after use.
- Chain lies in the chain locker becomes brittle.
- Range in dry dock or whenever a suitable occasion arises.
- Transpose first 2 or 3 shackles (ie, change to inboard side) or change end for end.
- Remark the cable.
- Examine cables for wear and tear.
- Renew if more than 10% of bar diameter is wore down.
- Every links to be sounded with hammer for a clear ring.
- Loose studs in wrought iron to be recaulked or renewed.
- If links are replaced or repaired, cable to be tested for its statutory proof load.
- Regular coating of Stockholm tar or special chain paint.

Towing

INITIAL ACTIONS BY MASTER



- Display NUC light or shape.
- Assess the distance from the nearest danger. Calculate the estimated time as per the present drift to the danger.
- Obtain weather forecast. Actions to be taken to save persons onboard.
- Assess actions to take to save life of persons onboard and/or the ship. Carry out repairs.
- Advise owner about the present situation and actions taken.
- Seek owner's advice and remind them to inform underwriters about the situation.
- Adopt measures to get the persons onboard to safety.

Towing

SECONDARY ACTIONS



- Adopt means of reducing drift. This may involve lowering down the anchors, using thrusters.
- Prepare the vessel for grounding or bad weather, if applicable.
- Inform the present situation to the vessels in vicinity that own ship is NUC, position, direction and rate of drift.
- Inform shore authorities if the vessel is drifting towards the shore and if there is likelihood of any oil spill.
- Consider negotiating a tow to a safe port.
- Make appropriate log book entries.

Towing

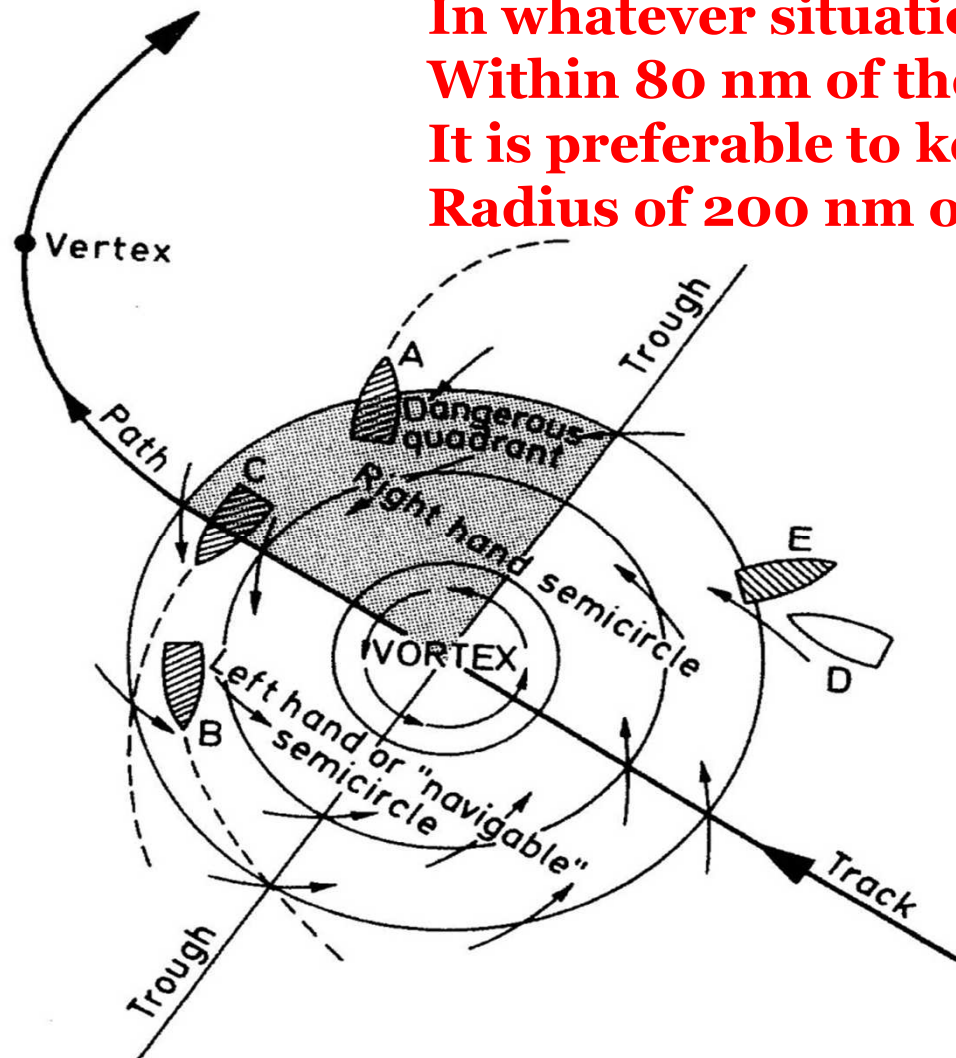
FACTORS TO TAKE WHILE NEGOTIATING



- Condition of the towing vessel, her power, towing arrangements, whether she will be able to tow safely.
- Is the towing vessel professional in this field?
- Type of contract is there with the towing vessel.
- The port to be towed. Is the port safe?
- Salvage award does not depend only if the ship is towed. It also depends on the effort put on by the towing vessel and the risk taken to save the ship/ environment.
- If repair works can be done in the intended port.

TRS - actions

**In whatever situation, avoid passing
Within 80 nm of the storm center.
It is preferable to keep out side of
Radius of 200 nm or more.**



Actions in a TRS



- Inform C/O,C/E - order to secure deck / ENG.
- Plot storm's position and observe its movement. Draw a diagram to determine safety sector. possible course to avoid storm.
- Ascertain ship's position in relation to the storm ,Bearing of storm's center.
- Order OOW to update and monitor weather information and reports.
- Record hourly in log book: Wind direction and force. Wind shift. Barometric pressure. Swell direction and height.
- Strengthen the bridge watch and ensure proper look out.
- Change over to manual steering if auto pilot cannot cope up with weather condition.
- Instruct C/O to:
 1. Check ship's stability, draft, trim.
 2. Press up tanks to reduce FSE and windage area
 3. Propeller and rudder sufficiently immersed to prevent
 4. Loses of their efficiency
 5. Racing of engines
 6. Excessive vibration
- Take heavy [weather precaution](#).
-

Actions in a TRS



- Remain outside of a radius of 200nm from storm center. If necessary:
 - Alter course to keep away from storm
 - Heave to, to let the storm pass by a safe distance
 - Reduce speed, if helps to avoid storm.
- Ensure vessel does not roll or pitch heavily, as it may cause
 - May be damage to cargo
 - Shifting of cargo
 - Damage to ship's structure
 - Damage to deck equipments, cranes, derricks etc.
- keep in mind:
 - Storm can be erratic and different from weather forecast.
 - Engine and any navigational/ communication equipment may fail any time.

Actions in a TRS



- Ensure personnel get enough rest, considering fatigue due to storm.
- No body to go on deck without C/O's permission.
- Instruct C/E to check steering gear and M/E performance regularly.
- Inform following parties about storm and amended ETA:

Owner.

Charterer.

Agent of next port.

- All preparations for heavy weather to be entered in official log book in details and deck log book.

Master's obligations in a TRS



- Masters of all ships, which encounter a TRS for which no warning was broadcasted, are obliged to
Report to the nearest coast radio station.
All nearby shipping.
By all available means at his disposal.
- He should also place his ship in a safe position by:
Avoiding passing within 75nm of storm
Preferably outside 200nm of center.

Master's obligations in a TRS



- Format of the message:

It shall be preceded by “securité” or “TTT”

Statement that a TRS is encountered.

Barometric pressure with unit, whether corrected or not.

Barometric tendency for last 3 hrs.

True wind direction

Wind force

Sea state

Swell

Own ship's course and speed.

- Message to be transmitted every 3 Hrs.

You are going to Singapore through south china sea, a TRS coming from east of the Philippine and two days remain to reach meeting point , action

- If a corrected barometer reading is 3 millibars or more below the mean for the time of the year, as shown in the climatic atlas or appropriate volume of the Sailing Directions, suspicion should be aroused and action taken to meet any development.
- If the corrected reading is 5 millibars or more below normal it is time to consider avoiding action for there can be little doubt that a tropical storm is in the vicinity.
- Radar may give warning of a storm within about 100 miles. At times the eye can be clearly seen.
- If an observer faces the wind, the centre of the storm will be from 100° to 125° on his right hand side in the N hemisphere when the storm is about 200 miles away, i.e. when the barometer has fallen about 5 millibars and the wind has increased to about force 6.

Alteration of course in heavy weather



- Dangerous/critical period when sea comes from beam.
- Wave group consists of about 8 waves.
- Lull period 1-2 waves among wave groups.
- Alter the vessel during lull period.
- Before turning, inform all department heads, take necessary precautions.
- No one is allowed on deck.
- Understand turning ability of the ship.
- Study wave development cycle carefully to find out calm period.
- To minimize danger of being capsized or swamped, the timing of turn to be coincide with calmer waves when abeam.
- Consider possibility of misjudgment of lull period and turning ability of the vessel.
- About 2/3 waves before the calm wave, start turning slowly with extreme caution.
- If turning misjudged, come back to previous heading.
- If turning is correct, continue the turn as fast as possible.
- When critical period is passed, increase the turning rate.
- Steady to next course and observe situation carefully.
- Adjust speed if necessary for following and quartering sea.

BAD WEATHER MANEUVERS



- Following options are available to the master, in case of bad weather:
- Head to sea or wind and sea on fine bow, at reduced speed
- Stern to sea at reduced speed, running before the wind
- Heave to preferably on the lee of an island
- Anchoring in shallow waters
- Altering course to avoid bad weather

Synchronized rolling



- **How to determine:**
- Vessel rolling heavily.
- There is no period of lull, rolling angle is almost same or increasing in every roll.
- Vessel is encountered by the same phase of wave almost all the times.

Synchronized rolling



Precautions:

- Synchronized rolling to be determined immediately.
- Occurs when the period of roll is equal or nearly equal to the apparent period of encountered wave.
- A very dangerous and undesirable condition.
- Successive waves tend to increase the angle of roll of the vessel, thereby produce danger of capsize.
- More dangerous in small vessels or vessels with low stability.
- Most dangerous when a beam sea is experienced and the ship reaches a greater maximum inclination at each trough and crest of wave.
- Danger of cargo shift.
- Danger of damage to vessel.

Synchronized rolling



Corrective actions:

- Change apparent period of waves by:
 - Alteration of course
 - Alteration of speed
- Change vessels rolling period by changing GM
 - By ballasting
 - By deballasting
- Shifting of ballast, FO, FW etc and changing transverse position of G.

Use of oil in bad weather

- Storm oil may be used to reduce heavy seas.
- It prevents seas from breaking.
- Reduces hazards of bad weather.
- May be used to in heavy seas to:
 - Turn the vessel.
 - Lowering life boats.
 - Rescue persons.
 - Hove to.
 - Towing operation.
 - Crossing a bar.
- Vegetable, animal or fish oil may be used.
- If not available, lubricating oil may be used.

Use of oil in bad weather



- Fuel oil and crude oil not recommended, as they may congeal or may cause harm to men in water.
- A small amount of oil can quench a comparatively large sea area.
- About 200 Liters of oil can quell 4500 m² sea area.
- To be distributed from both bows when heading into wind and seas.
- To be distributed from weather side when lying stopped or running with seas on the quarter.
- Should be used gradually.
- It may be done by:
 - Trailing a punctured hose full of oil
 - Through a punctured canvas bag which have been weighted and filled with oil soaked cotton.
 - Flushing through water closets.

Onboard preparations and proceeding for search and rescue

- Post extra look out.
- Inform C/E to st-by engine, but at full sea speed.
- Inform owner/ charterer about the deviation.
- Note down deviation time, position and ROBs.
- Assign duties to officers.
- Instruct C/O to prepare:
 - Ship's hospital to receive casualties and prepare stretchers, blankets, foods, medicines.
 - Prepare rescue boats and ready for immediate launching.
 - Prepare rescue boat crews and check communication.
 - Extra life jackets, life buoys, buoyant life lines, line throwing apparatus readily available.
 - Rig guest warp, accommodation ladder, scrambling nets and life lines running from bow to astern at the water edge on both sides.
 - Prepare crane/derricks with cargo nets for recovery of survivors.
 - Test search lights, signaling lamps, torches.

Upon receiving a distress alert 30 miles off



- Check distress position and own ship's position.
- If able to provide assistance without endangering own ship and crew:
 - On receipt of distress alert, Listen on VHF CH-16 for 5 minutes.
 - If RCC does not acknowledge, acknowledge alert by radiotelephony (CH16).
 - Inform CS and/or RCC. Enter details in log. Reset system.
- Establish plain language communication as soon as possible and obtain details of distressed vessel such as:
 - Identity
 - Position
 - Course
 - Speed
 - Nature of distress
 - Type of assistance required.

Upon receiving a distress alert 30 miles off



- Provide the distressed vessel my following information:
 - Identity
 - Position
 - Course
 - Speed
 - ETA at the scene
 - Distressed vessel's bearing and distance.
- I will contact RCC / SMC via coast radio station.
- I will take required [onboard preparation](#) for search and rescue.
- If I cannot find any survivor after going to the scene, I will report to RCC and [conduct a search](#).

Onboard preparations and proceeding for search and rescue



- Instruct 2nd officer to:
 - Plot both vessels' positions and establish course to rendezvous at maximum speed and update ETA.
 - Plot other vessels within the search vicinity together with their respective movements.
 - Change over to manual steering.
 - Plot [search pattern](#).
 - Keep continuous radar watch.
 - Track all vessels in the vicinity.

- Instruct 3rd officer to:
 - Contact RCC via CRS
 - Maintain communication radio watch and update distress information.
 - Monitor weather report.

Rescuing survivors in water



- Lower rescue boat.
- Approach from lee side of the survivor.
- Throw a life buoy with a strong buoyant life line to the survivor.
- Pull him near boat and haul him carefully.
- If the person is unconscious, rescue crew (with immersion suit, if required) to enter sea.
- Rescue person to carry the rescue quoits, the open end to be on the rescue boat to haul the person and prevent him from drifting from the rescue boat.
- In the way survivors to be rescued one by one.

When master is not obliged to assist



- When vessel is unable to rescue, e.g., vessel does not have enough bunker.
- When it is unreasonable e.g., the distance is so far the vessel will take 4/5 days to rescue, but that place is a traffic dense place and survivors may be easily picked by other vessel.
- When it is unnecessary, e.g., a man overboard in ice/cold region and distance is so far that vessel will take long time to go there. So it is impossible for a man to survive in this situation.
- If the vessel have not been requisitioned by the master of distress vessel, but more other ships have been requisitioned and they are complying with the requisition.
- The master of a requisitioned vessel will be released from the obligation if he is informed by the distressed vessel or by the search and rescue service or by the master of another vessel which has reached the distressed position that assistance is no longer required.

Common Law



- **Common law obligations:**
 - The ship shall be seaworthy.
 - The ship shall be ready and proceed to voyages with reasonable dispatch.
 - The ship shall not deviate from the usual route.
-
- **Common law exception:**
 - Act of god
 - Act of queens enemies
 - Restraints of rulers, princes and people
 - Jettison of the cargo for common benefit.
 - Negligence of the shipper
 - Inherent vice of the cargo.

A carrier is not protected by common law exceptions, if:



- Negligence - not taking reasonable steps to protect cargo from loss or damage.
- Vessel was unseaworthy at the beginning of voyage.
- The loss or damage occurred while the vessel was deviated unjustifiably.

Arbitrators



- **Arbitrators:**
- Professionals, with good knowledge in maritime laws.
- To decide matters in dispute between two parties to a shipping related contract eg charter party.
- Arbitration is alternative to litigation.
-
- **Advantages of arbitration:**
- Greater convenience than court.
- Faster settlement.
- Less formality than the court.
- Expert knowledge of arbitrators.
- Lower cost.
- Less publicity.



PORT OF REFUGE



- Under what circumstances:
- The ship may be damaged due to various reasons such as: Collision
Grounding
- The ship is damaged in such an extent that it is unsafe to continue the voyage.
- In the case the voyage to be diverted to the nearest safe port which is called port of refuge.
- It is a “justifiable deviation”.
- The ship is repaired as necessary at the port and the voyage may be resumed after the ship becomes seaworthy.

PORT OF REFUGE



- Master's concern

- Can the port be reached safely? (Enough fuel, extent of damage).
- Are the port authorities friendly/hostile?
- Can the vessel enter port and remain in safely?
- Repair facilities in the port.
- Cost of repairs reasonable?
- Can cargo be discharged/stored?
- Crew repatriation facilities.
- Can owner's representatives enter/leave freely?
- Spares/stores readily available?
- Can ship's spares/stores imported easily?
- Survey facilities available.
- Port free of war, strikes, civil commotion?

PORT OF REFUGE



- After deciding POR :
 - Inform owner, charterer, agent at original destination and give them the reasons to enter POR.
 - Consult with underwriter.
 - State requirements at POR.
 - Inform agent at POR.
 - Inform port authorities.
 - Contact with P & I club at POR.

PORT OF REFUGE



- **While deviating to POR :**
 - Inform the owner:
 - Date, time, position, nature of incident
 - ROB of D/O, FO, FW onboard.
 - Present situation onboard
 - Weather: present and future
 - Master's intention to deviate
 - Name of port of refuge
 - ETA at port of refuge
 - Assistance required.

- **Inform agents at POR:**
 - Name, port of registry
 - Official No, IMO No
 - Ships particulars (GT, NT, LOA, LBP, Draft)
 - Reasons for entering
 - ETA
 - Amount of cargo and distribution
 - Details of assistance required

Stowaways onboard



- **Responsibilities of master:**
 - To make every effort to determine port of embarkation.
 - To make every effort to establish identity, including nationality and citizenship.
 - Prepare statement containing all information relevant to stowaway.
 - Notify existence of stowaway to:
 - Ship owner
 - Appropriate authorities to port of embarkation
 - Appropriate authorities to next port of call
 - P and I club
 - Flag state
 - Charterer, if required.
 - Not to depart for planned voyage for deporting stowaway.
 - To ensure that stowaway is presented to appropriate authorities at next port of call.
 - To take appropriate measures to ensure security, general health, welfare and safety of the stowaway till disembarkation.
 - Not to include stowaway in crew list or AoA.
 - Not to involve him in any shipboard works.

Voyage Charter



- **Ship-owners obligation:**

- To provide seaworthy ship.
- Arrive in loading port in agreed date
- To load the agreed cargo
- Carry the cargo to the agreed discharge port
- To discharge and deliver the cargo.
- Ship's running cost, voyage cost, loading and discharging cost with the exception of free in and out FIO terms are agreed.

- **Charterer's obligation:**

- To provide agreed cargo in agreed port
- To load the cargo within laytime.
- To pay the freight at the agreed time.

Time Charter



- **Shipowners obligation:**
 - Owner shall bear all running costs e.g.
 - Costs of crewing
 - Repair, maintenance, survey and certification costs
 - Stores
 - Hull and machinery insurances.
- **Charterer's obligation:**
 - Charterer will bear following costs
 - Bunker, fuel, canal dues, port charges.
 - Pilotage, towage, agency fees
 - All loading, stowing, trimming and discharging costs
 - Agents and stevedores

P & I Clubs



- An organization formed by ship owners.
- For the purpose of mutual insurance losses not covered by the marine policy.
- A non profit making organization.
- Obtains its fund from its members.
- Each member pays certain amount depending on:
- Tonnage of their ships.
- Amount of claims sustained by them.
- Provides security for cover against 3rd party risk.
- Offers protection for contractual liabilities.

P & I Clubs



Risks covered under PROTECTION

- 1/4Th of any claims an owner may have to pay for damage to any ship.
- Claim for damage done to dock, pier, wharf or other fixed object.
- Damage for the loss of life or personnel injury.
- Repatriation of distressed seamen, sickness, hospitalization, medical and funeral expenses.
- Loss of life and personnel injuries following a collision.
- Cost of raising a wreck.
- Quarantine expenses.
- When cargo carried to be discharged at berth.
- Cargo is discharged to lighterage vessels
- The cost to be borne by ship.
- Unless exception clause “quarantine expenses” is inserted in C/P.
- Cargo damage due to improper navigation.
- Cost of DOT inquiries.
- Oil pollution.
- Legal costs of defending claims if incurred with the consent of the club director.
- Cargoes irrecoverable proportion of general average.

P & I Clubs



Risks covered under INDEMNITY

- Claims in respect of wrong delivery of cargo.
- Ship's liability to cargo after collision not recovered by insurance.
- Fines or penalties imposed as a result of innocent breaches of the followings:
 - Common law.
 - Public health regulations.
 - Immigration laws.
- Barratrously acts including smuggling of servant of ship owner.
- Cost of releasing cargo claims with the consent of director.

P & I Clubs



Scope of activities regarding shipmaster

- When serious difficulties arise in connection with ship in connection with ship, cargo, crews, advice of agent and P&I club to be sought.
- When require a private surveyor due to a classification society not available, the master can ask the agent of his P&I club to recommend.
- When the master is in doubt that the dangerous goods loaded will constitute a danger to life, ship and cargo, advice can be seek.
- When to avert or minimize loss is not possible, master should contact P&I club for technical and legal advice.

Marking of IMO number



- Covered by SOLAS CH-XI-1, regulation - 3.4.
- Place-1 is any of the following places:
 - On the stern of the ship
 - On either side of the hull
 - Amidships port and starboard
 - On either side of the superstructure, port and starboard
 - On the front of the superstructure
 - In the case of passenger ships, on a horizontal surface visible from the air.
- Place-2 is any of the following places:
 - Either on one of the end transverse bulkheads of the machinery spaces
 - On one of the hatchways
 - In the case of tankers, in the pump-room
 - In the case of ships with ro-ro spaces, on one of the end transverse bulkheads of the ro-ro spaces.

Take over command as a master



- Go to company office and meet technical superintendents, discuss about:
 - Ship particulars
 - Trading areas
 - Company's and charterer's instructions
 - Voyage instruction, type of charter
 - Special instruction for maintenance and survey
- Complete change of command form.
- On the way to master's accommodation, form an initial impression of the ship's general condition and maintenance by observing exterior conditions such as: draft marks, load line marks, condition of hull, deck, superstructure, rigging of accommodation ladder, safety net, LSA & FFA arrangements.
- Meet outgoing master and hand over letter of appointment and authorization slip.
- Go through the hand over note, ship's condition report, manning level, company and charterer's instructions.
- Sight all the statutory certificates as per [MSC-14/2005](#), any survey due, maintenance/preparation for each survey.
- Go through the filing system and all types of log books.

Take over command as a master



- AOA & last port clearance
- Crew welfare and watch arrangements, any crew change/ repatriation in this port/ next port.
- Watch arrangement.
- Take over all stores, ROB of FO/DO/GO/FW, provisions, medical stores as per scale, narcotics under master's control.
- Cash balance onboard, ship's account, satellite radio accounts.
- Ask master about port rotation, trading areas, general condition of ports, present cargo work, ship's stability, estimated time of completion, cargo plan, departure draft, trim, GM etc.
- Detail of cargo gears, anchors, deck machineries, hatches and their conditions, maintenance condition and schedule.
- Crew familiarization process, basic trainings, onboard training programs, drills etc.
- Go to bridge with master, familiar with bridge and navigation equipments, their operational conditions and deficiencies, maneuvering characteristics of the vessel in various conditions, passage plans, charts and publications, GMDSS equipment familiarization and their operations.
- Latest weather report received, weather expected in voyage.
- Enter new master's name in OLB. Also the change over of command including the list of documents onboard in OLB, signed by both masters.
- Enter new master's particulars, sign off/on in AOA.
- Ensure approved copy of stability booklet is available.

MASTER'S STANDING ORDER



- **General:**
- Understand company's SMS manual.
- Follow bridge procedures manual, standing instruction, night orders.
- **Look out:**
- Bridge should never be unattended.
- Keep a proper look out at all times, by all available means as appropriate.
- Use RADAR, ARPA.
- **Compass error:**
- All gyros are aligned at all times.
- Compass errors to be taken once in a watch.
- Compass errors to be taken after every large alteration as practicable.
- Check courses.
- **ROR:**
- Strictly comply with ROR.
- Display proper lights and shapes.
- Use proper sound signals if required.
- Use fog signals in restricted visibility.
- Take early action to avoid collisions.
- Call me if in any doubt.
- Always maintain a safe distance from nearby ships.
- Maintain a CPA of two miles if there is enough searoom.
- Maximum possible CPA in coastal and dense traffic areas, without endangering navigation.
- Inform me when traffic causing concern.
- Use ground speed in ARPA for anti collision.

MASTER'S STANDING ORDER



- **Visibility**
- Monitor visibility at all times.
- Check visibility by radars.
- Call me if visibility reduces to less than three miles.
- **Position fixing**
- Determine primary and secondary methods of position fixing.
- Position to be obtained at regular intervals.
- In deep sea, position once a hour. In coastal areas, 15minutes or less.
- **Tides and currents**
- Always keep tidal predictions ready, especially in coastal areas.
- Always be aware about set and drift.
- Call me if keeping course due to strong current is difficult.
- **Weather**
- Always monitor the present weather.
- Obtain up to date information about weather from NAVTEX, EGC, VHF, weather fax, MF-HF broadcast whichever available.
- Inform me when you observe any presence of cyclone, depression or bad weather.
- Keep an eye on barometric pressure. Inform me if it reduces 3mb in a watch.
- Inform me if significant change of wind force or swell without any warning.
- **Bridge con**
- My presence on bridge does not mean I have taken over the con.
- Taking over must be by verbal expression.
- Con change over between the watch officers also should follow the same principle.
- Bridge con not to be handed over during any action.

MASTER'S STANDING ORDER



- **Use of engines**

- Engines under your disposal.
- You can use engines when required.

- **Distress**

- Call me when you receive any distress alert.
- Call me when you meet any distressed vessel or person.
- Do not transmit or acknowledge any distress alert without my concern.
- Ring general alarm in case we are in any distress.

- **Hand steering**

- Vessel to be on hand steering with two steering motors under following circumstances:
- Making or leaving port.
- When taking actions in close quarter situation.
- While maneuvering.
- Passing close to shoals.
- Passing narrow channels.
- During heavy weather.
- Any other situation when it is deemed necessary.

- **Echo sounder**

- To be used while passing shallows, making ports, departing ports.
- While passing 100m, 50m, 20m contours.
- Any time if it deemed necessary.

-

MASTER'S STANDING ORDER



- **Rounds after watch**
- All officers to take round after watch and report to bridge.
- Rounds to be made in accommodation, galley, car decks.
- Any risk of fire, leak, water ingress, cargo lashings to be checked.
- **Filling up deck log book**
- To be filled up after every watch with ink.
- Courses, weather, comparison of compasses, emergency drills, look out man etc. to be written.
- Log book must be initialed.
-
- **Maneuvering book**
- To be filled up by watch officers, with ink.
- Control and try out of engines, times, names of pilots
- Must be initialed.
-

Lashing of heavy lift container parted



- Do an [FSA for container lashing parted](#), with master, chief engineer and bosun.
- Ascertain the possibility of re lashing the container, considering cost benefit assessment.
- Consult securing manual for guideline.
- Brief crews about the operation and necessary precautions.
- Prepare adequate equipment for operation.
- Reduce ship's speed and alter course to suit the present sea condition so that there is least rolling/pitching.
- Rig life line for crew's movement.
- Send crews on deck, under the supervision of chief officer.
- Keep life buoys, rescue boats ready for immediate launching.
- Maintain efficient communication with the working group.
- Crews should be on protective clothing.
- Immobilize cargo movement (shoring, wedges), double up lashing.

Additional requirement for construction and equipment for safe carriage of dangerous goods regarding



- Water supplies.
- Source of ignition.
- Detection system.
- Ventilation.
- Bilge pumping.
- Personnel protection.
- Portable fire extinguishers.
- Insulation of machinery space boundaries.
- Water spray system.
- Separation of ro-ro spaces.

Cargo Care

Actions in heavy weather



- Measures to avoid excessive accelerations are:
 - .1. alteration of course or speed or a combination of both;
 - .2. heaving to;
 - .3. early avoidance of areas of adverse weather and sea conditions; and
 - .4. timely ballasting or deballasting to improve the behaviour of the ship, taking into account the actual stability conditions.

Actions when cargo shifted



- .1. Alterations of course to reduce accelerations;
 - .2. Reductions of speed to reduce accelerations and vibration;
 - .3. Monitoring the integrity of the ship;
 - .4. Re-stowing or re-securing the cargo and, where possible, increasing the friction; and
 - .5. Diversion of route in order to seek shelter or improved weather and sea conditions.
6. Tank ballasting or de-ballasting operations should be considered only if the ship has adequate stability.

FUMIGATION



Preparations

- A thorough cleaning of cargo spaces after discharge.
- Box beams, stiffeners, deck girders, pipe casings, bilge wells, strum boxes etc, are cleaned thoroughly from cargo residues.
- Cargo spaces to be air tight.
- All compartments, accommodations, store rooms to be available to the fumigators.
- They should be opened internally, but outside doors locked.
- Food stuffs must be removed unless permitted by fumigators.
- The ship has been prepared as required by the fumigator.
- Watchmen posted to prevent unauthorized boarding.
- Warning notices posted on gangway and entrances of the accommodation.
- All crews to be landed ashore during the fumigation period.
- A complete search to be carried out for any crew or person left onboard and a certificate is given by master, countersigned by fumigator to this respect.
- All blowers, air cons, fans in holds and accommodations to be switched off. The generators may be shut off for the fumigation period.

FUMIGATION



● Procedures

- Fumigation is carried out to disinfest the ship, cargo holds and accommodations.
- Strong toxicants are used.
- Fumigants are applied as solid or liquid but act as gases.
- No pesticides to be applied on human or animal foods without professional's advice.
- After all preparation and precautions, fumigant is released and the ship kept under gas for at least two hours for empty ship and four hours for loaded ship.
- Entry to be made in fumigated spaces in an extreme emergency.
- People must be wearing protective equipment, breathing apparatus and safety harness
As per the fumigators, when the ship is disinfested adequately, Fumigator is to inform master.
- With assistance of necessary crew, they will gas free the ship.
- Engine personnel to start generator, ventilation fans.
- The must be wearing sufficient protective clothing with breathing apparatus.
- When the ship is gas free and safe for reoccupy, a test of all spaces to be made for toxic gases and oxygen content.
- A gas free certificate is to be issued by fumigators stating that the ship is free of toxic gases and safe for re-occupancy.

LOADING IMDG CONTAINERS



- Check DG note, DG manifests are provided.
- Vessel to be given proposed stowage plan.
- Check if segregation requirements are met.
- Check marking, labeling and placarding of the containers are in good condition.
- Damaged or leaked containers will not be accepted.
- Keep combustible materials away from sources of ignition.
- Stow in places not liable to damage or heating.
- Stow in a position so that the contents may be moved/jettisoned in case of any emergency.
- Naked lights and smoking is prohibited in or near DG areas.
- Fire fighting appliances are kept ready to deal with possible fire.
- Protective clothing and SCBA sets to be available.
- Bunkering, hot work, use of radar or radio transmitters to be stopped, especially if the cargoes are explosive type.
- If possible, the operation to be in daylight hours. At night, adequate lightings to be provided.
- Ambient temperature in relation to the flash point to be taken into account.
- Any spillage to be carefully dealt with, taking into consideration the nature of the substance.
- Consult EMS and MFAG in case of any accident involving DG.
- Once containers are loaded, location of DG containers to be counterchecked with the bay plan.

Risk assessment



- A systematic way to determine and assess risks involved in any type of routine or emergency operation.
- Company to provide suitable and sufficient risk assessments involving risks related to health and safety.
- A continuous process and under constant review.
- The risk should be assessed before the work begins on any task for which no valid risk assessment exists.
- Aim is to minimize accidents and ill health onboard ships.
- Assessment should include consideration of existing precautions to control risk such as hot work permit, use of warning signs, restricted access etc.

Risk assessment



- **Pro-forma** , A simple pro-forma may be used to record findings of a risk assessment:
- Work activity
- Hazard(s)
- Controls in place
- Personnel at risk
- Likelihood of harm
- Severity of harm
- Risk levels
- Actions to be taken
- Administrative details
- **Elements:**
- The main elements of risk assessment may be as follows:
- Classify work activities.
- Identify hazards and personnel at work.
- Determine risks.
- Decide if risks are tolerable.
- Prepare action in plan
- Review adequacy of action plan.

Dry docking with full cargo onboard



Consideration:

- Vessel is subjected to more severe stress and strains than normal dry dock.
- Uneven distribution of weight.
- Additional weight of the vessel
- Unable to achieve required draft for entering
- Certain extra precautions to be taken.

Dry Docking



- **Critical instant, Critical moment**

- It is the moment just before the vessel takes blocks overall.
- The up-thrust of bilge block acts on the stern frame.
- The up-thrust is maximum at this moment.
- It can be calculated by following formula:

$$P_{\max} = \text{MCTC} \times t / l$$

MCTC = Moment to change trim by 1 cm.

t = Trim in cm.

l = Distance of CF from AP.

- It is called critical instant because maximum loss of GM occurs at this instant.
- If GM becomes negative, the ship may capsize or slip from block.

Dry Docking



Critical period

- The period since the keel first touches the block until the vessel takes blocks overall.
- An upthrust is caused by the blocks, denoted by "P".
- P at any instant can be calculated by the following formula:
- $P = \text{TPC} \times \text{Change in mean draft in cm.}$
- P is maximum at the instant before vessel takes blocks overall. It can be calculated as:
- $P = \text{MCTC} \times t / l$ { t = trim in cm, l = dist of CF from AP }
- Due to the upthrust, the vessel reduces its GM.
- The G moves UP, thereby GM is reduced.
- M moves down to M', thereby GM is reduced.
- Shift of G (Center of gravity) or M (Transverse metacenter) may be calculated as:
 $GG' = (P \times KG) / (W - P)$, $MM' = (P \times KM) / W$
- The danger is, due to subsequent loss of GM, the vessel may lose positive stability and may capsize.
- Maximum loss of GM to be calculated beforehand.
- It is dangerous if negative GM occurs in dry dock.

Survey During Dry Docking



Docking survey

- Interval not exceeding 2½ years.
- Surveyor normally examines following aspects:
- Condition of underwater hull
- Integrity of hull openings
- Conditions of rudders and stabilizers
- Anchors and chains

Additional surveys

- When vessel is grounded, collided, damaged due to fire or any accident.
- Major repairs or modifications done
- Issue of endorsements or exemption certificates

Other statutory surveys as per SOLAS, MARPOL, Load line etc. if required:

- Annual survey
- Intermediate survey
- Renewal survey.

Dry docking with full cargo onboard



Actions to be taken before entering:

- Press up the DB tanks beneath the holds.
- Distribute the weight of the cargo evenly over the inner bottom.
- Avoid local loading
- Inform yard about cargo's characteristics, cargo plan and weight distribution in respective holds.
- All cargoes onboard properly lashed, secured.
- Communicate with yard with respect to extra shores or keel/bilge blocks.
- Vessel upright, minimize free surface effect, adequate stability, trimmed as per yard's requirement.
- Stand-by and prepare fire fighting equipments for repair and adjacent areas.

Dry docking with full cargo onboard



Procedures:

- Not possible for normal dry docking.
- Damage or repair works in a suitable position.
- Possible to pump out some of the dock water sufficient to expose the affected area.
- Leave the vessel partly waterborne.
- Reduce the reactions on the blocks.
- Reduce the tendencies of hogging.
- Reduce the tendencies of sagging.

Refloating in dry dock



- **Before:**
- Ship's stability condition to be kept as close as to that when she is entering in the dry dock.
- Enough GM and positive stability during critical period.
- No changes of weight to be made without the consent of the dock-master.
- Movable weights to be secured.
- Minimum free surface effect and no list.
- All plugs to be secured.
- Anchors stowed and secured.
- All overboard discharges secured.
- Anodes fitted.
- All pipings, cable connections with shore disconnected.
- Start gyro, check heading.

Refloating in dry dock



- **While refloating:**
 - Inform E/R when flooding dock.
 - Check for water tightness.
 - Sound all tanks.
 - Following times to be logged down:
 - Flooding commenced
 - Vessel floated
 - Dock gate opened
 - Vessel left dock.
- **After refloating:**
 - Check operation of all equipments.
 - General cleaning and washing
 - Normal sailing checklist.
 - Check water tight integrity of the vessel.

Precautions before proceeding to ice zone



- **Before proceeding to ice zone, I will check the following items:**
- Article of agreement and the geographical limit, expiry of article of agreement.
- Class certificate, if ship has ice notation.
- Check the charter party contract
- Insurance coverage – premium may be high.
- Instruct C/E:
 - To check heating system for accommodation, steering gear, bridge windows;
 - To check viscosity of hydraulic oil for all cranes, winches and boat engines, if necessary, renew.
- Instruct C/Off to check/ indent:
 - Warm clothing for full complement
 - Protective gloves
 - Extra blanket
 - Spare bulbs for navigation light
 - Steam hoses
 - De-icing compounds
 - Axe, shovels.
- Instruct navigating officer to ensure:
 - Navigational equipments in good working condition
 - Sufficient charts are available
 - Gather all information regarding the limits of ice, ice seasons, navigation in ice.

Roles of classification societies



- The classification societies operate by publishing rules and regulations relating to the structural efficiency and the reliability of propelling machinery and equipment.
- These rules are a result of years of experience, research and investigation into ship design and construction.
- They are in fact a set of standards.
- A classification society exists to classify or 'arrange in order of merit' such ships as are built according to its rules or are offered for classification.
- A classed ship is therefore considered to have a particular standard of seaworthiness.
- The insurance premiums depend upon the class of a ship - the higher the standard the lower the premium.
- A classed ship is shown to be of sound construction and a safe means of transport of cargo and passengers.

HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION



- **The system covers survey and certification requirements of the followings codes and conventions:**
- International Convention for the Safety of Life at Sea (SOLAS), 1974
- The International Convention on Load Lines, (LL) 1966
- The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)
- The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
- Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code)
- Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code).

Certificates related to HSSC



- [Passenger Ship Safety Certificate](#), including Record of Equipment
- [Cargo Ship Safety Construction Certificate](#)
- [Cargo Ship Safety Equipment Certificate](#), including Record of Equipment
- [Cargo Ship Safety Radio Certificate](#), including Record of Equipment
- Cargo Ship Safety Certificate, including Record of Equipment
- [International Load Lines Certificate](#)
- International Load Lines Exemption Certificate
- [International Oil Pollution Prevention Certificate](#)
- International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk
- International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk
- International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk
- Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk

SOLAS Certificates



- [Passenger Ship Safety Certificate](#)
 - [Cargo Ship Safety Construction Certificate](#)
 - [Cargo Ship Safety Equipment Certificate](#)
 - [Cargo Ship Safety Radio Certificate](#)
 - Safety Management Certificate
 - Document of Compliance
-
- International certificate of fitness for the carriage of dangerous chemical in bulk. (For chemical tankers).
 - International certificate of fitness for the carriage of liquefied gases in bulk. (For gas carriers).

Load line certificate



- **Overview**

- Issued under international loadline convention.
- Validity: 5 years.
- Issued by classification society.

-

- **Survey items**

- Stability booklet
- Weather tightness of hatch ways and hatch openings
- Machinery space openings
- All openings on the weather deck
- All ventilators on deck and their coamings.
- All airpipes and their coamings.
- All cargo ports and similar openings.
- All scupper inlets and discharges from enclosed spaces.
- Side scuttles, freeing ports.
- Construction of deckhouses, superstructures and their bulwark and railings on the freeboard deck.
- Condition of walkway
- Structural alteration that could effect strength of the ship.
- Record of particulars issued with loadline certificate.

Preparation for load line survey



- Stability booklets available and endorsed by surveyor.
- Vessel's structural strength is sufficient:
- The decks or hulls are not badly corroded.
- There is no crack on deck or hull.
- Hatch ways and hatch openings are weather tight.
- Machinery space openings weather tight.
- All ventilators on deck and their coamings are in good condition.
- All openings on the weather deck are weather tight.
- Cargo ports and other similar openings below freeboard deck are watertight.
- Non-return valves, overboard discharging valves are operational.
- Pumping arrangements in steering flat and forepeak tanks are in good condition.
- Portholes, funnel flaps, sky lights in good condition and operational.
- Bulwarks, railings are in good condition.
- Deck line, loadline and draft markings are well painted.

Preparation for safety construction survey



- Structural strength of the vessel is good. No part of deck or hull is not badly corroded.
- Water tight doors are in good condition. Remote and local controls working properly.
- Bilge pumping and drainage arrangements are in good condition.
- Electrical equipment and installation
- Emergency sources of electrical power
- Electric and electro hydraulic steering gears
- Precaution against shock, fire and other hazards of electrical origin
- Fire protection arrangements, fixed and portable fire fighting equipment are well maintained and in good operational condition.
- Boilers and machinery, Means of going astern, Shaft
- Boiler feed system in good condition. Steam pipe systems in good condition.
- Air pressure systems are in good condition. Cooling water systems are in good condition.
- Fuel, lubricating and other oil systems are in good condition.
- Means of communications are in good condition. Steering gear, Anchor chain and cables
- Means of escapes are well maintained and in good condition.
- Means of stopping machinery , Shutting off fuel suction pipes
- Closing of openings, For specialized tankers and UMS ships, additional items.

Anchor certificate



Followings are the contents of an anchor certificate:

- Type of anchor
- Weight of anchor including crown shackle in kilograms
- Length of shank in mm
- Length of arm in mm
- Weight of head of anchor
- No of test certificate
- No and date of drop test

Cargo ship safety radio certificate



Overview

- Issued under SOLAS convention.
- Validity: 5 years.
- Issued by classification society.

Survey items

- VHF radio telephony
- VHF DSC Tx and Rx
- MF/HF radiotelephony, NBDP
- MF/HF DSC
- INMARSAT
- NAVTEX receiver
- EGC receiver
- EPIRB, battery expiry date
- SART, battery expiry date
- Two way VHF radio telephony apparatus
- Main and emergency sources of power
- Battery, battery charging system.
- General operators certificate.
- GMDSS log book.

IOPP Certificate



Survey items

- Following items are as per MARPOL convention and in good working order:
- Structure, equipment, system fittings and arrangements of the ship.
- Equipment and associated pump and piping system.
- Oil discharge monitoring and control system.
- Crude oil washing system.
- Oil water separating equipment.
- Oil filtering system.

ENHANCED SPECIAL SURVEY



- **Aspects**

- A specific survey program in written format must be worked out in advance.
- Dry docking is required to complete a vessel's special survey of hull.
- All tank coatings are to be evaluated periodically.
- Tanks having poor coating conditions to be evaluated more frequently.
- Close up survey to be carried out to check the condition of critical members of ships structure. This includes:
 - Transverse web frame rings.
 - Deck and bottom transverses.
 - Transverse and longitudinal bulkheads.
 - Girders and stiffeners.
 - Cargo and ballast tanks and cargo hold stiffening members.
 - Forward cargo hold framings.
 - Cross deck structures and hatch covers.
 - Coamings in bulk carriers.
 - Surveyor may extend close up survey if deemed necessary.
- Areas of substantial corrosion (which includes areas have a wastage of greater than 75% of the allowable margin) require further thickness and an extended close up survey.

IN WATER SURVEY



- Accepted in lieu of one of the two docking surveys required in a five years period.
- Applicable for ships where in water survey (IWS) notation is assigned.
- It is to provide the information normally obtained from docking survey.
- Consideration is only given to an in water survey where a suitable high resistance paint has been applied to the underwater hull.
- In water survey requires following satisfying conditions:
 - Size (beam) of the ship.
 - High resistance paint.
 - In water visibility.
 - Suitable draft.
 - Clean hull.
 - Good communications between the diver and the surveyor.
 - Done by a recognized firm.
 - Personnel involved are competent.

Flag state control



- Maritime administration of a country under whose flag the vessel is flying.
- Established to ensure compliance with various local and national regulations by merchant vessels.
- They are empowered to inspect the ship.
- They can check operational procedures.
- They can verify competency of officers or crews.

Port state control



- Established to ensure compliance of various international regulations by merchant vessels engaged in international trades.
- Established by the maritime administration of a country in whose port the vessel is in.
- They are empowered to inspect the foreign ships in their ports.
- They can detain substandard ships.
- They can check operational procedures.
- They can verify competency of officers or crews.
- They are to verify that the condition of the ship & its equipments comply with the requirements.
- They back flag state.

PREPARATION FOR RESTRICTED , VISIBILITY STCW requirement



- **In my standing order i have clearly instructed that in event of restricted visibility the oow what should do**
- **As per rule 6 and rule 19 have to proceed to safe speed**
- **Sound the appropriate fog signals as per rule**
- **Put the engines on stand by (duty engineer in engine room)**
- **Post extra look out**
- **Wheelman on bridge**
- **Switch on navigation lights**
- **Operate and use the radar (including radar plotting)**
- **Close all watertight doors.**

when Main ENG fails on English channel



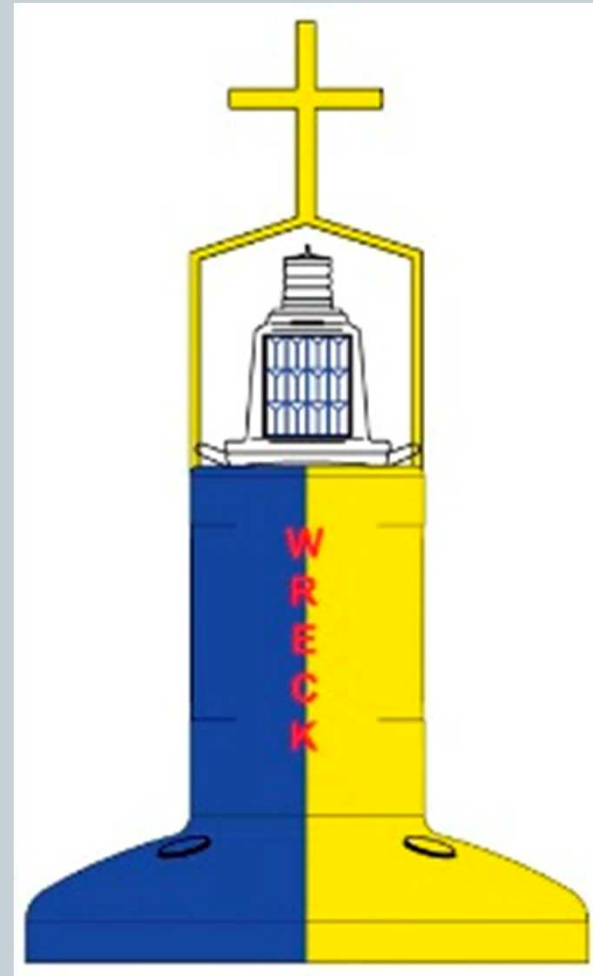
- Advise ENG room.
- Transmit urgency message on VHF (PAN PAN).
- Inform appropriate VTS to warn the traffics in vicinity.
- Study the chart and think about anchoring.
- Call anchor party to fwd for emergency anchoring.
- Contact owner and/or manager as soon as circumstance permits.
- Seek for assistance if there is an eminent danger such as grounding , pollution , collision.
- Exhibit N.U.C signal.
- Consider the use of tug.
- Assess the extent of damage and possibility of repair on board.
- Enter all facts in log book.
- Assess the delay imposed to vsl by keeping accurate time recording.
- Record all timings of repair.
- Inform class survey.
- Inform P&I club correspondence.
- Prepare note of protest.



Emergency Wreck Buoys

Emergency Wreck Buoys

Emergency Wreck Buoys provide a clear and unambiguous means of marking new wrecks. This buoy is used as a temporary response, typically for the first 24 - 72 hours. This buoy is coloured in an equal number of blue and yellow vertical stripes and is fitted with an alternating blue and yellow flashing light.



MASTER HANDING OVER/TAKING OVER



- Any major defect including ship`s hull damage.
- Any defect still pending from last psc/fsc inspection.
- Main engine operation & condition of steering gear equipments.
- Navigational/radio equipment & their certificates.
- Emergency batteries condition.
- EPIRB/SART condition & their certificate.
- Condition of security equipments & last date of “security alert system test”.
- Fuel consumption in loaded & ballast condition and rob or bunker request.
- All ship`s certificates and their expiry date.
- Any special comment regarding personnel behavior.
- Present condition of provision & galley equipment.
- Vsl present employment and if there is the next voyage instruction.
- Is there any class surveyor condition? And any recommendation.
- Availability of next voyage charts & publication and their corrections.
- “SORB” and “SSORB” kept up to date.
- Amount of cash & bonded store on board.

MASTER HANDING OVER/TAKING OVER



- Amount of victual ling on board.
- Any charterers instructions for communication/speed/consumption.
- EPP/security drill.
- Condition of l/b & l/r/
- General condition of deck & hull/
- Condition of cargo equipment (cranes, derricks or cargo pumps).
- Condition of ballast & bilge pump.
- Condition of cargo hold/tanks.
- Condition of SOPEP locker equipment.
- Condition of ropes & mooring winches.
- Condition of refrigeration system & other provision stores.
- Cleanliness of the accommodation.
- The crew healthy condition.
- Condition of auditing.
- Last SCM/management meeting.
- List of narcotics on board.

Action when drugs are found onboard



- 1.with at least one officer as witness record the position of the package and take photograph.
- 2.make a detailed record of the discovery of the drugs in the official logbook , noting the followings:
 - date of discovery
 - the location which the package was found
 - the approximate quantity of the substance or number of packages
 - the name and rank of the finder(s)
 - the names and rank of all witnesses
 - the reason why the finder was in location
- 3.inform the ship owner or manager as applicable.
- 4.inform the P&I correspondent at the next port of call.
- 5.inform the agent at the next port of call requesting him to inform the appropriate shore authorities.



Action when drugs are found onboard



6. retain the package in a secure place (e.g. ship's safe or bond locker) and ensure that P&I clubcorrespondent and agent are aware of the retention so that they can inform the authorities at the nextport.
7. if necessary search other locations for further caches.
8. do not permit crew to go ashore on arrival until authorized by appropriate authorities.
9. when handling the packages :
 - wear skin protection
 - do not inhale or taste fumes or powder
 - do not allow anyone to smoke in the vicinity
 - wash hand and brush clothing clean as soon as possible afterwards

loading Bitumen in drums



practical diligent and prudent measures to safeguard the ship and ensure sound delivery of cargo.

- Ensure all drums are sound condition and content absolutely intact.
- Bitumen is a most difficult cargo to clean up after discharging if contents leak, therefore you should take appropriate measures to place plastic or similar material underneath the drums (lining the floors & the sides of holds) to protect ship against the effects of any spillages.
- Drums should be well dunnaged every tiers and packed hard to ensure tight stowage.
- To prevent drums rubbing one against the other and rupturing while in transit, you are therefore advised to provide some form of protection by chocking with soft dunnage or old tires in between drums.
- Drums stowage should be restricted & limited to seven high only. Drums always should be stowed upright.

Loading steel product

light rain, rusty product, mechanical damage apparent

- Claim on fresh water damage can be rejected by owner but not damage by salt water when chlorides are not detected at the time of loading, but are observed at the time of discharge.
- Accurate records can however help the owner to defend these claims:
 - 1-Hose test hatch covers, record, take photograph or film, record oh hatch covers maintenance e.g dry dock.
 - 2-During the sea passage, the cargo should be kept in as dry an atmosphere as possible and any necessary ventilation, either mechanical or natural, should be recorded in the deck log book or ventilation record book with air and hold temperatures and dew points. The surface temperatures of the steel coils themselves should be recorded and the cargo should be ventilated in accordance with psychometric values. If holds were washed by sea water, clean hand reached area/tank top with fresh water.
- Take a good set of photographs of any damage at both loading and discharge ports.
- Stop loading and closed hatch covers if rain water level increased in tank top.

Loading steel product

light rain, rusty product, mechanical damage apparent

- Arrange pre-shipment survey, owner/charterer/ p & I: The surveyor should help masters to decide exactly the condition of the steel coils and thereafter the remarks to be inserted on the mate's receipts and bills of lading.
- The receivers of the cargo or the cargo underwriters also appoint surveyors who will want to board the ship and inspect the hatches and other openings into the holds.
- If the shippers insist on clean bills of lading they should present cargo that are dry and without traces of rust. Claused bills of lading for this type of cargo will not necessarily create any problems with letters of credit.
- The remarks on mate's receipts and bills of lading should correctly record the apparent rust condition, the presence of any chlorides and any mechanical damage.

Loading steel product

light rain, rusty product, mechanical damage apparent

- Any physical damage such as denting or bending should also be entered on the bill of lading. Where the packing is damaged this should be noted too, together with any obvious damage to the contents.
- Any further damage caused by the discharging stevedores should also be noted so that recovery can be made from them for any claims that may be lodged for physical damage to the cargo caused by them.
- If damage is suspected on arrival at the discharge port then the master should contact the Club's local correspondents direct and ask for the appointment of a competent surveyor to examine the hatches and the stowage of cargo.
- Suitable clause: Rusty ■ Rusty edge■ Rusty end■ Top sheets rusty■ Rust on metal envelopes■ Goods in rusty condition■ Wet before shipment■ Covered with snowCovers wet■ Covers rusty■ Packing wet■ Packing rusty.

Carriage of Nickel Ore Cargoes

Cargo Information

- Bulk cargo shipping name (BCSN)
- Cargo group (A, B or C)
 - group A – cargos which may liquefy
 - group B – cargos which possess a chemical hazard
 - group C – cargos which are neither liable to liquefy nor possess chemical hazards
- IMO class and UN number
- Total quantity of cargo, Stowage factor
- Trimming needs and procedure
- Moisture content (MC), transportable moisture limit (TML) and (FMP)
- Angle of repose and likelihood of shifting
- Toxic and flammable gasses which could be generated by the cargo
- Toxicity, corrosiveness and propensity to oxygen depletion of the cargo
- Emission of flammable gasses in case of contact with water
- Radioactive properties if applicable

Carriage of Nickel Ore Cargoes

Master's Obligations



- Should monitor the loading operation from start to finish.
- Loading should not be commenced until the master or the ship's representative is in possession of all requisite cargo information in writing.
- The master has an overriding authority under SOLAS not to load the cargo or to stop the loading of the cargo if he has any concerns that the condition of the cargo might affect the safety of the ship.

Carriage of Nickel Ore Cargoes

Shipper's Obligations



(1) Cargo Information

- The shipper must provide the master or his representative in writing with all information and documentation required under the Code in sufficient time before loading, to ensure that the cargo can be safely loaded onto, carried and discharged from the ship.

(2) Documentation, The documentation must include:

- A certificate/declaration certifying the moisture content of the cargo.
- A certificate certifying the TML of the cargo together with the FMP test result prepared by a competent laboratory.
- (3) Laboratories: The shipper must identify the laboratory used to conduct the tests on the cargo samples.

Carriage of Nickel Ore Cargoes

Advice to Master

- The master or his appointed representative should never sign any document seeking his confirmation that the cargo is safe to carry.
- It is quite clear that under the IMSBC Code, the shipper is obliged to declare the cargo is safe for carriage, not the master. Signing any document stating the cargo is safe for carriage may prejudice a member's rights against a shipper in the event of a subsequent casualty.
- Do not sign such a document

UCP 500/600

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- .A documentary credit arrangement involves the buyer of the goods making an arrangement with its bank to issue a promise (a letter of credit) to the seller that the bank will pay against receipt of the shipping documents.
- One such shipping document is the bill of lading. To ensure the ease of arranging such documentary credits, the international chamber of commerce devised in 1933 a code for the uniform customs and practice for documentary credits ('UCP Rules'), this rules with the current edition being known as UCP500.

Refusal to sign bill of lading



- In circumstances where the master feels that he should refuse to sign a bill of lading he should seek guidance from the ship owner or from the P&I club or their correspondent.
- If the refusal of the master to sign a document is met with physical threats or coercion against the ship or master or crew, then the master should sign the document and after sail out from port at reach to safe place may give notice of protest.

Master can refuse to sign a bill of lading if:

- Contains facts about the cargo which are incorrect.
- Contains facts about the voyage which are incorrect, or names discharging ports outside the charter party range.
- Says deck cargo is being carried under deck.
- Contains terms which the charter party expressly prohibits in the bill of lading.

Refusal to sign bill of lading



- ✦ The master should not sign bills of lading in blank.
- ✦ Where any person coming on board insists that the master takes delivery of a document from them he should mark it 'for receipt only'.

The scope of P & I Club covers



- Liabilities in Respect of Seamen
- Liabilities in Respect of Supernumeraries
- Liabilities in Respect of Passengers
- Liabilities in Respect of Third Parties
- Stowaways, Diversion Expenses
- Life Salvage, Persons in Distress
- Quarantine, Liabilities Arising from Collisions
- Non – contract Damage to Ships
- Damage to Property
- Pollution , Wreck Removal, Towage
- Contracts, Indemnities and Guarantees
- Liabilities in Respect of Cargo
- General Average, Fines
- Legal Costs, Sue and Labor
- Risks Incidental to ship Owning

CO₂ Room Inspections and tests required as per Iranian Flag State Administration



- The cylinders are to be examined for corrosion and damage, and the total number is to be checked.
- Cylinders should be weighed or the level of liquid gauged at least once every two years. Allowable weight loss of CO₂ not to exceed 10 percent and 5 percent respectively of the related quantity in each cylinder or storage container.
- Where the weight loss exceeds the limit, the cylinder should be discharged, overhauled, hydraulically tested, dried and recharged with the correct weight of contents.
- periodic hydraulic testing of cylinders is to be carried out at maximum intervals of 10 years.
- A minimum of 10 percent of the total number of storage cylinders are to be tested. However, on failure of any one cylinder, all the remaining cylinders in the system are to be tested.

VDR test and Certificate requirements



- The voyage data recorder (VDR) system, including all sensors, shall be subjected to an annual performance test.
-
- The test shall be conducted by an approved testing or servicing facility to verify the accuracy, duration and recoverability of the recorded data.
- In addition, tests and inspections shall be conducted to determine the serviceability of all protective enclosures and devices fitted to aid location.
- A copy of a the certificate of compliance issued by the testing facility, stating the date of compliance and the applicable performance standards, shall be retained on board the ship.

Receiving Bunker



- Hold a meeting with c / e , c / o , 2nd / eng , 2nd / o , and discuss :
- Safety aspects , bunkering check list and form , SOPEP guide , pollution prevention , soundings , list , trim , line alignment , securing of the barge , proper and safe means of access , communication , appropriate signs & lights , connections , sampling , specification , checks (of the ordered fuel and supplied one) and any other matter relevant matter , eg assembling and keeping ready the submersible pump . blanking the scuppers , etc...



C / OFF Reports missing of a crew at 08 : 30 hrs. Stating that he was last seen at 23 : 00 hrs. (Last night) . explain your action

- Slow down your speed .
- Investigate the matter from other crew .
- Carry out a proper search on board .
- When ascertained that he is not on board send a pan pan message to MRCC & ships in vicinity & go on the reciprocal course with full speed .
- Estimate his present position by applying set & drift to the 23:00 hrs. Position (Last night) , this will be the “ datum transferred position ” .
- Head for the datum now .
- prepare the followings : rescue boat , pilot ladder , gangway, net, basket, crane and whatever deems necessary
- Post extra look out with instructions .

C / OFF Reports missing of a crew at 08 : 30 hrs. Stating that he was last seen at 23 : 00 hrs. (Last night) . explain your action

- Send initial report and inform DPA.
- When on the datum start your search adopting an appropriate search pattern.
- Estimate the duration he may stay alive considering the sea water temperature (refer to IAMSAR) to cancel the search .
- Do not forget to record the position , time / date & ROB (FO, DO , FW) when you turn on the reverse course (legal aspects of deviation) .
- Whether the person is found / recovered or not , when the estimated life time is over & it seems to master to be appropriate to end up the search he resumes his course & speed as they were for the intended passage & records Date , time , position , rob for legal aspects .

C / OFF Reports missing of a crew at 08 : 30 hrs. Stating that he was last seen at 23 : 00 hrs. (Last night) . explain your action

- Prepare and record in this regard and collect all available evidences .
- Prepare a canceling message for your initial pan pan message and send it to MRCC & all ships in vicinity .
- Rescuer all those unlashd for rescue , such as rescue boat , etc.....
- Send report to DMA , liner division, FP, legal and insurance & SM as appropriate .
- Correct the crew list and muster list .
- Collect all his belongings as appropriate .
- Ask for reliever from FP.
- Make sure proper entry is made in the log book throughout the operation .

C/P terms



- **SHINC Notice**, Sunday, holidays included: NOR can be given even during holidays.
- **SHEX Notice**; Sunday, holidays Excluded: NOR can not be given during holidays.
- **FHINC Notice**; Friday, holidays included
- **FHEX Notice**; Friday, holidays Excluded

• امکان محاسبه Lay-time بصورت Shinc امری متداول می باشد.

• WIPON, WIBON, WIFPON, WCCON; اگر کشتی آماده پهلودهی و شروع بارگیری یا تخلیه باشد ولی به هر دلیلی در لنگرگاه نگه داشته شود Lay-time آغاز خواهد شد.

C/P terms



در Gencon اگر NOR قبل از ساعت ۱۲ ظهر اعلام گردد lay-time از ساعت ۱۳ همان روز شروع می شود و اگر بعد از ساعت ۱۲ اعلام گردد lay-time از ساعت ۶ روز بعد آغاز می گردد.

- در Amwelsh زمان شروع Lay-time منوط به گذشت چند ساعت پس از صدور NOR می باشد.

- Running days روزهای تعطیل هم محاسبه می گردد.

- Working day of 24 hours روز کاری ۲۴ ساعته

- Working day of 24 hours consecutive روز کاری ۲۴ ساعته متوالی، به نفع مالک کشتی است، ساعت های تنفس بین شیفت کاری جز زمان Lay-time محسوب می گردد.

- Weather permitting تعداد ساعت بارندگی که واقعا، باعث توقف عملیات بارگیری و تخلیه شده اند جز زمان Lay-time محاسبه نمی گردد.

- Weather working day چه عملیات تخلیه و بارگیری شروع شده باشد یا نه مدت زمان بارندگی از Lay-time کسر می شود.

Payment of Freight



Payment of freight

Another clause sometimes found in charterparties is one that stipulates that the master should sign bills of lading 'at such freight rate as presented'. In a voyage charterparty such a clause cannot require a master to sign 'freight paid' bills of lading unless the master knows for sure that the freight has been paid or unless the charterparty explicitly covers this point. The master should, under such circumstances, seek guidance from the shipowner. In the case of a time charterparty, the master should also assume the time charterer is not aware of the provision or the terms of such a bill of lading and check the position with the charterer and obtain its written instructions before signing.

Signing bills of lading



Signing bills of lading as presented

In some charterparties there is a clause stipulating that the master should sign bills of lading 'as presented'. It might appear that the master would be obliged to sign bills of lading presented by the charterer even if the details of the actual cargo loaded are incorrect. This is certainly not the case in practice because the Hague and Hague-Visby Rules require the shipowner to issue the shipper, if requested, a bill of lading that records the apparent order and condition of the cargo, the quantity and the date the cargo was loaded.

If the details recorded on the bill of lading presented by the charterer do not accurately reflect the apparent order, condition and quantity, it would be deceitful if the master signed a bill of lading recording cargo as being in apparent good order and condition when the master was aware that this was not the case. The member's cover with the P&I club may also be prejudiced if the master signs such a bill of lading.

Situations when master must not sign B/L as presented by charterer



- Destination outside C/P terms
- Clauses expressly required by C/P is missing, master to sign B/L
- Wrong description of condition, quantity and nature of cargo
- Incorrect date
- Stating cargo loaded under deck when not
- Stating freight prepaid when not

You are departure from bandar abbas and suppose to drop anchor in khore fakkan explain your action?



- Normal planning and preparation
- The entire operation of the anchoring should be done under power.
- The gypsy should not be taken out of gear at all, because the heave weight of the cable between sea bed and hawse pipe will undoubtedly take charge.
- The anchor party should have an idea of the depth of the water, and be able to estimate when the anchor is on the bottom.
- As the vessel drops astern once the anchor begins to hold, the cable should be seen to grow slightly.
- It will be increasingly difficult to see the cable snatching or growing to indicate that the vessel is brought up.
- When lowering away, under no circumstances, should the anchor cable be allowed to run out from the brake.

Your SAFCON certificate is expired what is your action, do you sail with v/l?



- When the SAFCON is expired, the vessel becomes out of class.
- As the main requirement of the insurance underwriters is that the ship has to be under class at all times, automatically the vessel loses her insurance cover.
- The P&I cover will be suspended.
- As the class is the requirement of the charter party, the vessel becomes off hire and in most of the contracts, it is the breach of contract.
- As a master, I have to give prior notice to the owner to take action about revalidation of the certificate.
- If the certificate is expired, I have to notify the owner, inform the class, inform the charterer and underwriter (through owner) to obtain new insurance cover and to make new agreement with the charterer.

Entries in the Oil Record Book



Machinery Space Operations (all ships)

- ballasting or cleaning of oil fuel tanks;
- discharging ballast or cleaning water from oil fuel tanks;
- disposal of oily residues (sludge);
- discharging overboard bilge water which has accumulated in machinery spaces;

Cargo/Ballast Operations (Oil Tankers)

- loading oil cargo;
- internal transfer of oil cargo during voyage;
- unloading oil cargo;
- ballasting cargo tanks and dedicated clean ballast tanks;
- cleaning cargo tanks including crude oil washing;
- discharging ballast except from segregated ballast tanks;
- discharging water from slop tanks;
- closing, after the discharge of the contents of slop tanks, all valves or similar devices opened to permit such operations;

Smoke from no.3 hold, action



- Rise emergency alarm.
- Head count all personnel.
- All F.F.A equipment to be ready/make ready both life boats for emergency abandon.
- Assess the reason of smoke; if possible enter into hold by B.A set to assess the reason.
- If smoke is from source of fire, assess the type of fire.
- start boundary cooling from the start of extinguishing.
- close all ventilators and booby hatches.
- If ship is equipped with CO2 system, release sufficient CO2 bottle into cargo hold.
- checking temperature of hold continuously.
- If fire extinguished apparently, checking to be done continuous to make sure .
- If temperature decreasing, after 24 hours check inside hold by using B.A set.
- If fire is not under control ship must proceed to port of refuge.
- sending urgent message via R/T.
- exhibit appropriate light and day signals.
- inform owner, P&I club, hull & machinery insurer & charterer (incase of time charter).
- note a protest.
- All operation and timing to be recorded.
- proper document to be collected as evidence.)

3rd party liability by P&I?



Protection and Indemnity (P&I) cover includes the following liabilities:

- cargo claims (e.g. for short delivery, loss or damage to cargo);
 - crew claims (e.g. medical expenses, repatriation, substitute expenses, compensation for death or injury);
 - collision liabilities (to the extent that the claim is not covered under the hull policy);
 - “fixed and floating objects” (e.g. damage to docks, wharves and buoys);
 - third party injury and death claims (e.g. from stevedores, crew members and passengers);
 - oil pollution liability (and liability for pollution by other substances);
 - special compensation payable in accordance with the International Convention on Salvage 1989
 - miscellaneous claims (including fines for innocent breaches of regulations, diversion and other expenses incurred in landing refugees, sick persons and stowaways, contractual liabilities including those of customary towage, unrecoverable general average contributions, ship’s proportion of general average when in excess of the insured value, salvor’s expenses under Lloyd’s Open Form, and wreck removal costs.
- * Freight, Demurrage and Defence (FD&D) cover indemnifies members for legal and related expenses incurred in connection with disputes under charter parties and other contracts, as defined in the club’s rules, but does not extend to the principal amount in dispute.

During loading sugar while berthed, chief/off inform you that there is water inside one of the bilges and the water level is increasing.

What is the reason and what is your action?

1. Stop any operation of ballasting, if any
2. Investigate whether the water is fresh water or salt water.
3. If f.w means the water is for cargo itself.
4. If salt water, the following estimation may be true:

The Water ingress from air pipe, sounding pipe, DB manhole due to unintentionally ballasting, or Leakage from non-return valve of bilge (INTERNAL CHECKING) Make sure that hull is safe and sound (EXTERNAL CHECKING)

Legal action:

1. Inform DPA and take advices.
2. Inform P& I club
3. collect evidence to prove exercising due diligence of owner for approval seaworthiness of vessel including: certificates, any records of inspection of survey or PSC, maintenance of vessel as per PMP, checking and inspections of cargo compartment prior to commencement of cargo operations, sounding book (collecting photo if available), deck log book, chief officer standing order, master standing order.

What is the difference between Demise Charter and Bareboat Charter?



- Bareboat charter is a contract for the lease of a vessel for an agreed period, during which the charterer acquires most of the rights of the owner. It is more at a ship financing arrangements than a trading agreement, But;
- Demise charter is a bareboat charter hinged to a management contract, so that the ship owner manages the vessel on behalf of the bareboat charterers. This is useful to charterers (such as Oil Company) who do not want to spend extra money on increasing their ship management team.

What will be your action if you come to know that the supplied bunker is contaminated?



- As a prudent master according to ISM, should instruct chief engineer before taking bunker to keep this fuel to separate tanks of the old fuel as much as possible.
- We should consider and assess other possibilities (i.e. the tank holed and water went inside the tank)
- The following parties should be informed:
 - owner, charterer (if chartered), manager (if under management), P&I club, Hull and Machinery (if caused damage)
- Note of protest
 - -if the machinery damaged and the ship cannot run:
 - .we should consider SALVAGE (whether on the base of LOF of fixed contract)
 - .sent URGENCY message (alert near coast stations and vessels in the vicinity)
 - .exhibit the appropriate lights and shapes (Not under Command)
 - .consider the port of refuge if necessary
 - .after repair under class surveyor take interim certificate of class
 - .send the fuel for analysis in the port

What is Synchronism?

What are the dangers? What to do?



Synchronism

- Occurs when the *natural period of roll of the ship is the same as the apparent period of waves.*
- When this occurs the wave gives the vessel a push each time causing it to roll furthermore, which could result in capsizing the vessel .
- However in practice this may not occur as the rolling period of the vessel *increases with angle of roll at large angles of heel and also because the period of sea waves tends to vary overtime*

What is Synchronism?

What are the dangers? What to do?



Dangers:

- Capsize
- Cargo shift
- Structural damage
- Racking (surge of liquids)
- Personal injury

Measures to be taken-

- Course alteration- this will alter the apparent period of waves, an alteration of course towards the sea will reduce the apparent period of waves.
- Alteration of speed- effective if sea is not abeam
- Change of GM- ballasting, de-ballasting or shifting of weights

SOPEP

(Shipboard Oil Pollution Emergency Plan)



Applicable to all vessels more than 150 GRT

Purpose-

- Acts as a practical guide for masters, crew and officers to prevent oil spills and carry out responsibilities associated with Marpol 73/78 (Annex 1)R-26
- Prevent a pollution
- Minimize or stop pollution occurrence during an emergency or ship board operations
- Acts as a link between shore and ship

Contents include-

- Response action to reduce or control the discharge of oil following an incident
- Procedures to report an oil spill
- List of authorities to contact
- Coordination with national and local authorities in combating an oil spill

Note protest to be issued after...



- Damage to the vessel has occurred due to any cause
- Damage to cargo-
 - Sea or weather
 - Likelihood of cargo damage during the voyage
- Failure to make a cancellation date- sea or weather conditions
- Serious breach of charter party by charterer or his agent
- Every case of general average
- After a consignee fails to-
 - Discharge
 - Take delivery of cargo
 - Pay freight

When to send a letter of protest



- Discrepancy between ship shore figures
- Discrepancy in bunker quantities received
- Other vessel likely to cause damage to own vessel- double banking (lack of fendering)
- Rate of loading too high or too less
- Manifold connection- restricted discharge rate
- Shore staff misusing ship equipment
- Vessel passing very close, causing ranging when made fast alongside a terminal
- Berth fendering equipment insufficient
- 2 copies are to be made- the original for the receiver and the other for being retained on board

Notice of Claims clause



- provides that in the event of an accident or occurrence which may result in a **claim under the insurance**, **notice** must be given to the **leading underwriter(s)** as **soon as possible after the date on which the assured, owners or** managers become aware of the accident or occurrence (and within 180 days), so that a **surveyor may be appointed** if the leading underwriter(s) so desire.

Tender Provisions clause



- provides that the **leading underwriter(s)** will be entitled to decide the port to which the vessel will proceed for docking or repair and will have a right of veto concerning a place of repair or a repairing firm.(47)
- provides that the **leading underwriter(s)** may also take tenders or may require further tenders to be taken for the repair of the vessel.
- provides that if the assured fails to comply with Clause 47, a deduction of 15% will be made from the amount of the ascertained net claim.

Duty of Assured (Sue and Labour)



- provides that the assured has a duty to take all reasonable steps to **avert or minimize any loss for which a claim** would be payable under the policy. In return, most costs incurred in taking such steps are recoverable from the underwriters.
- was formerly known as the **Sue and Labour Clause**.
- **Sue and labour charges are not to be confused with general average expenditure. They are incurred for the benefit of only a single interest (e.g. the vessel, or the cargo), whereas general average expenditure is incurred for the common benefit (e.g. of the ship, cargo and freight, if any at risk).**
- **Examples of sue and labour charges might include costs incurred by a shipowner in recovering a lost anchor and cable, and costs incurred by a cargo owner of having a refrigerated cargo stored ashore while a ship's refrigerating machinery is under repair.**

Waiver Clause



- This is in fact continuation of the 'sue and labour' clause because it lays down that 'no acts of the assurer or assured in recovering, saving or preserving the property insured, shall be considered as a waiver or acceptance of abandonment.
- 'This clause is nowadays found in almost all public policies of Lloyds's.

Special Compensation



- The salvor does not necessarily have to achieve success in preventing and minimizing damage to the environment in obtaining special compensation. If success is achieved, special compensation will be payable in greater amount under Article 14 (2) as follows: +30% of expenses or even +100% of expenses.
- However, negligence on the part of the salvor will deprive his right of the whole or part of any special compensation under Article 14 (5).

Receiving voy instruction, action:



- Read imp items of voy inst, consider cargo-laycan-laytime. NOA-NOR, communication, identify parties concerned, cargoworthiness of vessel.
-
- Management meeting, discuss :requirements, spare, store, provision, bunker (+5 days F.O & +7 days D.O) , fresh water..
- Seaworthiness, cargo specification, draft restriction, load & disch ports.
- Voyage planning, high risk area, risk assessment, contingency
- Consideration in time charterer: on/off hire survey , bunker , RPM & speed.
- If CH/ENG request 100MT bunker extra: see his calculation, ask his reason, explain loss of 100 t cargo, send his statement along bunker request E.Mail.

Speed log / Radar fails, what to do?



Speed log fails, what to do?

- Investigate the fault, get advice from electrical supplier, and send a report to SM, if can not be repair onboard?= get exemption certificate via flag state(class).

If radar fails what to do?

- Inform DPA / DMA, SM who call class/flag and get exemption certificate, repair request, defect list updated, inform PSC of next port otherwise may be detain by code 30.(in case of essential nav. equipment failure call DPA= ISM requirement). Cargo ship safety equipment certificate will be affected, on arrival C.O.C will be issued by class. Management meeting, ENG readiness, Review standing order, advice deck officers, extra lookout, wheelmen, rest hours, contingency plan, risk assessment, .

**Bulk cargo , Grain loading: no stowage factor given:
owner instruct shore figure and clean BL:**

- Calculate 2 figures range up and range down from ref.books= IMSBC code or Thomas stowage.
- If laycan tight request for extending it, if shore / ship figure difference: give LOA to agent, if insist to sign do it yourself as owner instructed.

Voy instruction to load general cargo:



- type & specification of cargo, CSM=cargo securing manual(remember its content by heart) , lashing point and materials, read Supplementary Requirements for different types of vessels: Ro-Ro, Bulk carrier & container ship in CSM. is there any list of cargo can be loaded in CSM?
- Can you load DG cargo? Check DOC for carriage of D.G(type of DG and location of loading are given).

Nickel ore:



- Check recent DA-11, refer to IMSBC code for properties
- Hazard: liquefaction (water on cargo surface) , cargo shift, heavy rolling, structural damage, flammable gas, ..) if liquefaction occurs water on cargo surface), submersible pump not electrical can be use.
- Cargo certificate: moisture content, TML, check different grade of cargo, check cargo sample, oven test , get advice from P&I/ agent.
- No loading during rain, check requirement in IMSBC code, shipper declaration and laboratory test certificate to be same (ship's name and port of loading to be indicated),

How to check ENG Department:



- ENG log abstract: L.Oil sample landing, superintendent check list, fleet check list , oil record book = bilge pumping out, position, master signature for every page, instruction to fill oil record book given in the first pages, noon report (consumption).
- Eng maintenance record, PMP, Monthly ENG maintenance record, doing CSM items by ship staff and getting photo, name signature of CH/ENG.
- **CH/ENG** : in charge of ENG Dep, technical advisor, maintenance of ENG & Auxiliaries.
- Master shall check ENG maintenance during weekly inspection.CSM items affect cert of class.
- Generator no.3 failure, action: investigate cause, reduce load on other generator , report to SM/DPA, as it is major defect, change of voyage plane to be consider, if no.2 fail also what? Port of refuge. No of generator require is in SAFCON certificate.

How to implement SMS:



- Conduct drills, do maintenance, certificates validity, SORB, SMRB, fleet check list, ISM manuals and amendment.
- Main deficiency found in SMS: consequences= PR-17 may be issued by surveyor.
- Send a report to DMA/DPA, get corrective action, conduct management meeting, investigate source of deficiency and root causes,

Alongside, a patch of oil around your ship, action?



- Source, may be from other ships, any operation in progress, any discharge.
- Possibility: transferring, discharging, de-ballasting,, bilge pump out, structure damage/ crack.
- Identify trace of oil patch. Organize crew as per plan, inform agent, P & I, PSC.
- Do you use chemical? Only approve substances
- If oil is not from your ship: inform port authority, get sample (absorbent or bucket)
- Check overboard / seals,.
- National contact point in SOPEP to be called only at sea.

Crew document:



- CDC, Passport, Medical fitness, competency cert and its endorsement, GMDSS cert & its endorsement, 2/o medical certificate, watch keeping cert for crew, basic course cert, SSO cert for CH/OFF.
- Short hand only 28 days, GMDSS cert independent from competency.
- Senior deck cadet cannot keep nav. Watch alone.

Taking over as a master:



- Office visit to obtain v/l info and condition, SM=defects/Dry dock, Commercial=voyage/charter party if any, DMA=New reg.
- Planning, Check list, visual observation of ship, safety impression , apparent condition, damages on the hull, safe gangway, ISPS compliance, reception of new comers, good house keeping, taking over forms, certificate & documents, survey due, CTM, nav & com equipment, crew history, medicine/ narcotics onboard, files & record, last PSC report, PSC code 16 rectify next port, if no inspection send E.mail to first port and keep it for 3rd port, voy instruction if any, DA-11 last circulars.
-
- cargo : document/SOF(date,stoppage,delay,cargo loaded or discharged)/ shipper declaration/ cargo plan/Disch permission / EDI paper plan/E.mail from owner to release cargo/ Express term in voy.instruction.

Survey and certificate:



- Class status, survey statement, CSM and COC items, PMP, survey report(end pages have CSM) list of CSM items will be stamped by class surveyor.
- What are safety certificates? Life raft cer / test, life boat cer/test, fire extinguisher cer/test, BA cer/test, CO2 cer/test, VDR cer/test, LRIT cert/no test, AIS/EPIRB test cer, provision crane as it is not recorded in chain register, for cer requirement check also flag requirements.
- Who issue CLC certificate? P & I

What is ITF?



- Looking for crew welfare, health, wages, food, hygen.
- ITF certificate is green, laminated, with ship;s name on it.
- ITF file with master, ITF agreement Certificate, need to prove fulfillment of requirement, company has proved the wages are as per list of wages attached, check contract of employment.
- Complain may be raised: AC/food/fresh water not good, .action as per procedure given in ISM manuals.
- Authority of ITF inspector: inspect ILO convention related safety matters such as cargo gears.
- He can not detain v/l but do it through PSC.