Oil Companies International Marine Forum

OVID

OVIQ 7100 Report RZNM-6414-3824-2704

Vessel Name	A small vessel
IMO	1234567
Operational Variants	Crew boats, CAT-2 (Small craft),

1. General information

1. Vessel/unit particulars

1.1.1. Name of the vessel/unit (Text)

Note: Prefixes (MV, SS etc.) must not be used unless they are actually a part of the registered name of the vessel/unit. The name must be entered exactly as it appears on the Certificate of Registry.

1.1.2. IMO/VIN number (Text)

State if not IMO Number

1.1.3. Country of registration of vessel/unit (Text)

If a change of country of registration has taken place within the past 6 months, record the date of change and the previous country of registration in the chapter end Additional Comments.

1.1.4. Gross tonnage (Number)

State if vessel/unit has not been measured.

1.1.5. Date vessel/unit delivered (Date)

1.1.6. Date of most recent major conversion, if applicable (Date/Not Applicable)

Provide brief details of most recent major conversion.

1.1.7. Date of inspection (Date)

Note: If the inspection extends to two or more days, record the circumstances in the chapter end Additional comments.

1.1.9. Name of the company commissioning the inspection (Text)

1.1.10. Time the inspector boarded the vessel/unit (Time)

1.1.11. Time the inspector departed the vessel/unit (Time)

If the inspection took place over two or more days, in two or more sessions, or was carried out by more than one inspector, record the arrival and departure details in the chapter end Additional Comments.

1.1.12. Name of the inspector (Text)

1.1.13. Vessel/unit activity at time of inspection (Text)

1.1.15. Vessel/unit type (Text)

1.1.17. Name of the vessel/unit's operator (Text)

Note: For the purpose of the OVID Programme, an 'Operator' is defined as the company or entity which exercises day to day operational control of, and responsibility for, a vessel/unit and, where applicable, holds the Document of Compliance under which the vessel/unit is named. The registered owner of a vessel/unit may or may not be the operator.

1.1.19. Telephone number of the operator (Text)

1.1.21. E-mail address of the operator (Text/Not Applicable)

1.1.22. Date the current operator assumed responsibility for the vessel/unit (Date)

2. Additional comments

1.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section. Information of a non-confidential nature related to the circumstances surrounding the inspection should also be recorded here. Examples are the presence of the Operator's superintendent, unusual operations that hampered or curtailed the inspection, etc.

2. Certification and documentation

1. Certification

2.1.1. Are all the Class statutory certificates listed in the guidance, where applicable, valid and have the annual and intermediate surveys been carried out within the required range dates? (Yes/No/Not Seen/Not Applicable)

Inspector should undertake a spot check of certificates to validate OVPQ data.
Certificates may include the following:
- Certificate of Registry
- Certificate of Class
- Interim Certificate of Class
- Continuous Synopsis Record
- Document of Compliance. Note: where applicable, the issuing authority for the DoC and the SMC may be different organisations, but the name of the operator of the vessel/unit must be the same on both. There should be a copy (which need not be a certified copy) of the DoC on board.
- Safety Management Certificate
- Safety Equipment Certificate
- Safety Radio Certificate
- Safety Construction Certificate
- IOPP Certificate
- Loadline Certificate
- International Ship Security Certificate
- International Tonnage Certificate
- Minimum Safe Manning Document
- Diving Systems Safety Certificate
- Dynamically Supported Craft Construction and Equipment Certificate
- MODU Safety Certificate
- Ship Sanitation Certificate
- International Sewage Pollution Prevention Certificate
- International Air Pollution Prevention Certificate
- International Anti-Fouling System Certificate
- Offshore Support Vessel Certificate of Fitness
- High Speed Craft Safety Certificate
- Permit to Operate High Speed Craft
- ERRV Certificate of Survey
- Helideck Certificate of Survey
- Passenger Certificate

With respect to SOLAS certificates, if the language used is neither English nor French, the text shall include a translation into one of these languages.
Note: Situations may arise in cases where a Recognised Organisation (RO) issues the original certificates and the vessel/unit's flag State Administration conducts subsequent annual surveys. In such cases, it is acceptable for the flag State to endorse the RO's certificates to attest that the annual surveys have been conducted.

2.1.2. Name of Classification society (Text/Not Applicable)

If the vessel/unit has changed class within the past 6 months, record the previous classification society and the date of change as an Observation. State if vessel/unit is not classed.

2.1.3. Name of P and I Club (Text/Not Applicable)

The name of the owner should be the same as that on the Certificate of Registry. A P and I Club Certificate of Entry should be provided to prove membership for the current year, which usually begins on the 20th February.

2. Safety management

2.2.1. Does the vessel/unit have a formal safety management system? (Yes/No/Not Seen)

The Company should ensure that the safety management system operating on board the vessel/unit contains a clear statement emphasising the Master/OIM's authority. The Company should establish in the safety management system that the Master/OIM has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary.
The inspector should undertake a spot-check of the list of contents of the procedures manuals to ensure that they are:
- relevant to the vessel/unit;
- user friendly;
- written in the working language of the crew.

And that they at least contain:
- a safety and environmental policy;
- emergency procedures;

- a description of the Master/OIM's and crew's responsibilities;
- operation plans;
- procedures for reporting non-conformities and for corrective action;
- maintenance programmes;
- procedures for auditing and reviews;
- programmes of drills,

The programme of drills must at least include emergency procedures for all credible emergency situations, such as, collision, grounding, flooding, heavy weather damage, structural failure, critical machinery failure, emergency towing, rescue from enclosed spaces, serious injury and medivac, and in addition abandon ship, man overboard, pollution clean up and ship security, including dealing with terrorism and piracy.
Occasionally the operator's procedures are available only in computerised versions. Ascertain whether there is adequate access for all personnel to a computer and whether adequate training has been given to all personnel in accessing the operator's procedures using one. In any case, a hard copy of the operator's navigation procedures should be available on the bridge. Make an Observation if paper and electronic systems differ.

2.2.3. Does the operator's representative visit the vessel/unit at least bi-annually? (Yes/No/Not Seen)

Record the date of the last visit.
Verify that office managers have visited the vessel/unit to undertake a formal review of the safety management system within the last six months.

2.2.4. Is a recent operator's audit report available and is a close-out system in place for dealing with non-conformities? (Yes/No/Not Seen)

Note: Satisfactory evidence should record that corrective action was taken to rectify non-conformities. A close-out system, which includes a time limit for corrective action, informing the operator when completed and the operator ensuring that it has been, should be in place and the inspector should ensure that the required actions have been made within the required time. Operator's audits must not be used as a means to record Observations.

2.2.5. Does the Master/OIM review the safety management system and report to the operator on any deficiencies? (Yes/No/Not Seen)

Note: The Master's review should be carried out annually and documentary evidence should be available. Make an Observation if no formal notification of the review has been submitted to the company and/or if no appropriate feedback has been received from the company.

3. Class documentation and surveys

2.3.1. Date of departure from the last drydock or underwater inspection (Date/Not Applicable)

State whether dry docking or underwater survey. In addition, if the last drydocking/underwater survey was unscheduled, record the date and the reason.

2.3.2. Is the vessel/unit free of conditions of class or significant recommendations, visas, memoranda or notations? (Yes/No/Not Seen/Not Applicable)

Record any conditions of class or significant recommendations, memoranda or notations of any nature, including due dates as an Observation.

4. Publications

5. Additional comments

2.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

3. Crew and contractor management

1. General

3.1.1. Are both crew and contractors required to comply with the vessel/unit's safety management systems in full? (Yes/No/Not Seen)

Check that the process provides guidance on addressing any conflicts between the vessel/unit's SMS and charterer's requirements. Check also that there is a formal means of verifiction that the vessel/unit's crew understand the contents of the bridging document.

3.1.3. Are both crew and contractors required to comply with the vessel/unit's drug and alcohol policy and testing regime? (Yes/No/Not Seen)

While on board the vessel/unit, all contract personnel should comply with the vessel/unit's D&A policy, except if the Contractor's policy is more restrictive.

3.1.7. Is there a common language stipulated for on-board communication? (Yes/No/Not Seen)

Record which language is stipulated.

3.1.8. Is there a satisfactory system for ensuring effective communications between contractors, the vessel/unit's crew and third parties? (Yes/No/Not Seen)

Where a common language is not spoken by all on board, arrangements should be in place to ensure the effectiveness of communications, without risking mis-understanding or ambiguity, at all times. This should include information on muster stations, emergency alarms and emergency procedures.

3.1.9. Is the safety management system documentation in the common language? (Yes/No/Not Seen)

2. Crew-specific

3.2.1. Does the manning level meet or exceed that required by the Minimum Safe Manning Document? (Yes/No/Not Seen/Not Applicable)

3.2.2. Is an adequate number of personnel required to be on board to perform anticipated marine operations? (Yes/No/Not Seen)

There should be sufficient marine crew to manage all planned concurrent marine operations with proper oversight as if each operation was a stand-alone duty.

3.2.3. Do procedures address scenarios which may require down-manning of non-essential personnel from the vessel/unit? (Yes/No/Not Seen/Not Applicable)

There should be specific groups identified as critical or non-critical with a hierarchy for controlled evacuation should it be deemed necessary, for example, if LSA equipment is compromised or on the onset of heavy weather.

3.2.4. Are the marine crew members appropriately qualified for the operations and equipment on board? (Yes/No/Not Seen)

There should be documentary evidence that competency has been assessed by an appropriate authority for specialised positions such as crane drivers; banksmen; fork lift operators; riggers; Helideck crews; FRC crews; etc

3.2.5. Is there a competence assessment process for the marine crew on board? (Yes/No/Not Seen)

Describe whether formal or informal, and who is responsible for assessments

3.2.6. Does the company operate a formal appraisal system for marine crew? (Yes/No/Not Seen)

Comment if it is a developmental system; record an Observation if there is insufficient guidance for the assessor and/or the assessee cannot respond formally within the process.

3.2.7. Is HSSE awareness one of the appraised behaviours? (Yes/No/Not Seen)

State who makes the assessment.

3.2.8. Is there evidence to confirm that the Master/OIM does not sign-on incorrectly certificated crew members or those without their original certificates, nor release incumbents? (Yes/No/Not Seen/Not Applicable)

Confirm by sighting log book records that new personnel are signed on before relieved personnel depart.

3.2.9. Are provisions made to provide the vessel/unit's crew with medical and first aid training and facilities? (Yes/No/Not Seen)

There should be documentary evidence of training courses and competency assessments

3.2.10. Are GMDSS requirements met with regard to qualified radio operator personnel, watchkeeping, and designation for distress communications? (Yes/No/Not Seen/Not Applicable)

Every ship shall carry personnel qualified for distress and safety radio communication purposes to the satisfaction of the Administration. That person should not be the Master (SOLAS IV/16.1)

3.2.11. Do all personnel maintain hours of rest records and are the hours of rest in compliance with STCW requirements? (Yes/No/Not Seen/Not Applicable)

All persons who are assigned duty as officer in charge of a watch or as a rating forming part of a watch shall be provided a minimum of 10 hours rest in any 24-hour period. The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length.
The requirements for rest periods need not be maintained in the case of an emergency or drill, or in other overriding conditions. 'Overriding operational conditions' are defined (Section B VIII/1.1) as to mean only essential work which cannot be delayed for safety or environmental reasons, or which could not have been reasonably anticipated at the commencement of the voyage.
Notwithstanding the above, the minimum period of 10 hours may be reduced to not less than 6 consecutive hours provided that any such reduction shall not extend beyond 2 days and not less than 70 hours of rest are provided in each 7-day period.

3.2.12. Have all deck officers attended bridge resource management courses? (Yes/No/Not Seen/Not Applicable)

Note: These should be formal shore-based courses and officers should have evidence of having attended them.

3.2.13. Have the Master and/or any officers with direct responsibility for ship handling received appropriate formal training in ship handling for the type of vessel/unit? (Yes/No/Not Seen)

Make an Observation if the Master and/or any officers having responsibility for ship handling have been on this type of vessel/unit for less than 2 years sea time, without formal training, or if the type of operation/manoeuvring is new to the them.

3.2.14. If the Master has been newly-hired within the last 12 months, did he receive appropriate pre-command training, including documented understanding of the Company's expectations? (Yes/No/Not Seen/Not Applicable)

In-house induction in Company expectations and requirements may be demonstrable with an Appointment Letter (expectations of Company attached) indicating date of office visit / induction.

3.2.15. Have all the deck officers received formal documented training for the navigational equipment fitted on board? (Yes/No/Not Seen/Not Applicable)

Specify whether the training is at a recognised shore-based establishment, formal on-board training with an external trainer, or CBT on board?

3.2.16. Does the company have a documented disciplinary process which facilitates removal of personnel from the vessel/unit if deemed to be a risk? (Yes/No/Not Seen)

This should include, as a minimum, non-compliance with SMS provisions, anti-social behaviour; alcohol/drug use; or ill discipline.
Check that the Master/OIM has authority to take appropriate action and that he is required to inform the vessel/unit's operators of action taken.

3.2.17. Does the company have a medical policy in place? (Yes/No/Not Seen/Not Applicable)

This should specify certification requirements; when to report issues; vaccination requirements; who is responsible for welfare on board; and reporting of prescription and non-prescription drugs.

3.2.18. Does the company promote high standards of housekeeping and hygiene awareness, particularly in food handling and storage? (Yes/No/Not Seen)

Confirm company procedures address all issues, including segregation of area from work dress to rest/recreational dress; appropriate provision of toilet facilities; linen changes weekly or better; and that good health and hygiene practices are publicised and enforced.

3. Contractor-specific

3.3.1. Is there evidence of training contractors in the content of the vessel/unit's safety management system? (Yes/No/Not Seen/Not Applicable)

Look for records of training and sample responses from contractors

3.3.2. Is there evidence of all contractors being familiarised with the vessel/unit's emergency procedures and requirements? (Yes/No/Not Seen/Not Applicable)

This may be part of the initial induction process, and should include personal reference documents

3.3.3. Are contractors encouraged to be involved in the vessel/unit's safety management processes, such as safety meetings? (Yes/No/Not Seen/Not Applicable)

Look for evidence of participation or documented input to the agendas. If positively excluded from input, make comment as an Observation.

3.3.4. Are the contractors appropriately qualified for their operations and the equipment placed on board the vessel/unit? (Yes/No/Not Seen/Not

Applicable)

Is there evidence that contractor staff have appropriate training and "rules of engagement" for their plant and equipment?

3.3.5. Are procedures in place to verify the adequacy of contractor's equipment before first use? (Yes/No/Not Seen/Not Applicable)

3.3.6. Have any additional hazards associated with contractor's operations and equipment been identified and risk assessed and appropriate control measures put in place? (Yes/No/Not Seen/Not Applicable)

Control measures should include appropriate medical training.

3.3.7. Are contractors aware that they must comply with shipboard accident/incident reporting and investigation processes? (Yes/No/Not Seen/Not Applicable)

There should be a clear understanding that accidents and incidents amongst the contractor crew must be reported.

3.3.8. Do contractors supply appropriate PPE? (Yes/No/Not Seen/Not Applicable)

Ascertain range of equipment provided; suitability for jobs expected; and equipment retire/renewal processes

4. Additional comments

3.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

4. Navigation

1. Navigation

4.1.1. Is the vessel/unit provided with comprehensive operator's navigation instructions and procedures? (Yes/No/Not Seen)

Notes: The navigation, training and bridge procedures policies should be reviewed. The existence of established bridge organisation procedures and the professional application of ship handling and navigational practices in compliance with international regulations should be ascertained.
Bridge manuals and navigation procedures should include general information and requirements on bridge organisation, watchkeeping, navigation and navigation equipment, charts, pilotage and port arrival and departure procedures.
The operator's procedures should include at least the following:
- a clear statement that safety of life and the safety of the vessel/unit take precedence over all other considerations;
- allocation of bridge watchkeeping duties and responsibilities for navigating procedures;
- a clear definition of the duties of the watch-keeping officers;
- circumstances when the master must be called;
- procedures for voyage planning and execution;
- chart and nautical publication correction procedures including, if appropriate, electronic chart corrections;
- procedures to ensure that all essential navigation equipment is available and fully operational;
- position reporting procedures;
- recording of voyage events;
- is there a documented procedure in place for entry into the 500 m/ safety zone?.
A hard copy of the operator's navigation policy and procedures must be available on the bridge.

4.1.11. Do vessel/unit's officers demonstrate a full understanding of changeover practices? (Yes/No/Not Seen/Not Applicable)

Check that there is a ready means to identify which mode of steering is engaged.

4.1.15. Has a system been established to ensure that nautical publications and charts, paper and/or electronic, for the intended voyage are on board, current and corrected up-to-date? (Yes/No/Not Seen)

All vessels/units should carry adequate and up to date official nautical charts, Sailing Directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage/operations.
An on board chart and publication management system is recommended to ensure that records are kept of what charts and publications are carried and when they were last corrected.
Note relating to the specific use of electronic charts. To use ECDIS as a stand-alone system without paper charts, two fully independent, IMO type-approved vector chart systems are required.

4.1.16. Is a lookout maintained at all times when the vessel/unit is at sea? (Yes/No/Not Seen)

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate to the prevailing circumstances and conditions as to make a full appraisal of the situation and the risk of collision. (Colregs Rule 5)
The look-out must be able to give his full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task. (STCW A-VIII/2-3.1/14)
The officer in charge of the navigational watch may be the sole look-out in daylight provided that on each occasion:
- the situation has been carefully assessed and it has been established without doubt that it is safe to do so;
- full account has been taken of all relevant factors including, but not limited to:
  - State of weather;
  - Visibility;
  - Traffic density;
  - Proximity of dangers to navigation; and
  - The attention necessary when navigating in or near traffic separation schemes;
- assistance is immediately available to be summoned to the bridge when any change in the situation so requires. (STCW A-VIII/2-3.1/15)

It is of special importance that at all times the officer in charge of the navigational watch ensures that a proper look-out is maintained. In a ship with a separate chartroom the officer in charge of the navigational watch may visit the chartroom, when essential, for a short period for the necessary performance of navigational duties, but shall first ensure that is safe to do so and that a proper look-out is maintained. (STCW A-VIII/2-3.1/32)

4.1.19. Are the factors necessary to identify a safe waiting position defined in the vessel/unit's operating manual? (Yes/No/Not Seen/Not Applicable)

Factors to be taken into account include loss of propulsion, adverse weather, prevailing wind and tide and conflicting traffic.

4.1.23. Is all navigation equipment in good order? (Yes/No/Not Seen)

Note: Regardless of whether a vessel/unit is required by legislation to carry specific navigational equipment, if equipment is fitted then it should be operational. Such equipment may be a course recorder, off-course alarm, voyage data recorder, electronic chart display or engine order logger/printer. Random checks should be made to ensure that equipment is operational.

4.1.24. Are navigation lights in good order? (Yes/No/Not Seen)

Note: Primary and secondary systems should be in good order, and there should be a procedure to check the navigation light failure alarm.

4.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

5. Safety and security management

1. General

5.1.1. Are all crew members aware of the identity and contact details of the Designated Person Ashore (DPA) or appropriate shore-based contact? (Yes/No/Not Seen/Not Applicable)

5.1.3. Are the vessel/unit's officers familiar with the operation of fire fighting, life saving and other emergency equipment? (Yes/No/Not Seen)

Note: Personnel should be familiar with the operation of the fixed fire fighting systems, the main and emergency fire pumps, the emergency steering gear, the donning and use of breathing apparatus and oxygen resuscitation equipment Appropriate records should be maintained.

5.1.4. Is personal protective equipment provided as required? (Yes/No/Not Seen)

Note: PPE may include as boiler suits, safety footwear, eye and ear protection, safety harnesses, fall arrestors, and chemical protective equipment etc.
Procedures should include the company's requirements for the inspection and replacement of PPE.

5.1.5. Are the PPE requirements for tasks clearly defined? (Yes/No/Not Seen)

Documented guidance relating to the use of equipment for specific tasks should be provided, preferably in the form of a matrix.
Working areas should have clear signs indicating PPE requirements.

5.1.6. Are personnel using PPE as required? (Yes/No/Not Seen)

5.1.8. Does the vessel/unit have documented procedures for Man Overboard scenarios? (Yes/No/Not Seen)

Check arrangements for raising the alarm and for deploying flotation and recovery equipment.

5.1.9. Is there a procedure for the reporting, investigation and close-out of accidents, incidents, non-conformities and near misses? (Yes/No/Not Seen)

Note: Port state inspection deficiencies should be recorded as non-conformities.

5.1.10. Are smoking restrictions in place and are they being adhered to? (Yes/No/Not Seen)

Restrictions should include specific controls when the vessel/unit is in the 500 m/ safety zone.

5.1.12. Is all loose gear on deck, in stores and in internal spaces properly secured? (Yes/No/Not Seen)

5.1.13. Does the safety management system address the control of hazardous substances used on board the vessel/unit? (Yes/No/Not Seen/Not Applicable)

This to include the handling, storage and disposal of materials such as lithium batteries, radioactive sources and biocides, together with appropriate formal training and qualification.

2. Medical

5.2.5. Are first aid kits readily available and subjected to regular inspection to confirm their contents? (Yes/No/Not Seen/Not Applicable)

3. Management of change

4. Drills, training and familiarisation

5.4.1. Is there a procedure for the safety induction of new personnel, including contractors? (Yes/No/Not Seen)

On-board training in the use of life-saving appliances, including survival craft equipment and in the use of the vessel/unit's fire extinguishing appliances shall be given as soon as possible after a person joins a vessel/unit.

5.4.2. Are emergency drills being carried out regularly? (Yes/No/Not Seen)

Lifeboat and fire drills should be carried as required by the flag State.
Check that all personnel on board are required to routinely participate in drills.
Note: Emergency procedures should at least include collision, grounding, flooding, heavy weather damage, structural failure, fire, explosion, gas or toxic vapour release, critical machinery/equipment failure, re-start after partial or total power failure, rescue from enclosed spaces, serious injury and helicopter operations.

5.4.3. Is regular training in the use of life-saving equipment being undertaken and are appropriate records maintained for each person on board? (Yes/No/Not Seen)

All personnel shall be given instructions which shall include but not necessarily be limited to:
- use of lifejackets and thermal protective aids;
- launching and operation of survival craft;
- problems of hypothermia, first-aid treatment for hypothermia and other appropriate first-aid procedures;
- special instructions necessary for use of the vessel/unit's life-saving appliances in severe weather and severe sea conditions.

5. Ship security

5.5.3. If the vessel/unit is NOT required to have an approved Ships Security Plan (SSP) because of vessel/unit's tonnage or trading area, are there Security Procedures in place? (Yes/No/Not Seen/Not Applicable)

Note: The deck watch should ensure that access to the vessel/unit is denied to all unauthorised persons.

6. Control of work

5.6.1. Does the vessel/unit operate a documented permit to work (PTW) system? (Yes/No/Not Seen)

A permit to work system should:
• cover all areas of the vessel/unit
• address vessel/unit crew and contractor work scopes
• define the scope of work
• identify hazards and assess risk
• establish control measures to eliminate or mitigate hazards
• link the work to other associated work permits or simultaneous operations
• be authorised by the responsible person(s)
• communicate the above information to all involved in the work
• ensure adequate control over the return to normal operations

The system should cover, as a minimum, the following activities:
• hot work
• confined space entry
• hazardous tasks
• work involving high voltages
• working at height and over the side
• Lock Out/Tag Out processes
• the need for multiple permits.

5.6.2. Does the PTW system specify roles and responsibilities? (Yes/No/Not Seen)

e.g. Performing authority, Area Authority, Isolating Authority, Gas Tester, Fire Watch and Enclosed Space standby

5.6.4. Does the PTW system specify when shore management approval is required prior to work being carried out? (Yes/No/Not Seen)

The system should require company management approval for higher risk activities, such as hot work in identified hazardous areas

5.6.6. Do personnel receive formal training in the use of the PTW system? (Yes/No/Not Seen)

Training to include specific training on an individual's roles and responsibilities.

5.6.8. Does the PTW or SMS include a "Stop the Job" policy or statement.. (Yes/No/Not Seen)

The policy or statement should develop and encourage a “Stop the job” culture if anyone feels unsafe or uncertain about any aspect of a task or operation

5.6.9. Does the PTW system include an effective isolation (Lock Out/Tag Out) process? (Yes/No/Not Seen)

Any work on energy systems - mechanical, electrical, process, hydraulic and others - should not proceed unless:
• the method of isolation and discharge of stored energy are agreed and executed by a competent person(s)
• any stored energy is discharged
• a system of locks and tags is utilised at isolation points
• a test is conducted to ensure the isolation is effective
• isolation effectiveness is periodically monitored (is there evidence of positive isolation?)
Check also if a long-term isolation record is maintained and if there is evidence of a policy for the temporary re-instatement of systems.

5.6.20. Are portable gas and oxygen analysers provided appropriate to the vessel/unit's operations and are they calibrated and in good order? (Yes/No/Not Seen/Not Applicable)

Check calibration records and that tests and inspections are included in the vessel/units planned maintenance system.
Check the availability of span gas on board.

5.6.21. Are personnel onboard trained and competent in the use and calibration of portable oxygen and gas analysers? (Yes/No/Not Seen/Not Applicable)

Records should be maintained.

7. Lifting equipment

5.7.2. Is an inspection and maintenance programme in place for other lifting equipment such as wire or webbing slings, shackles, eyebolts etc? (Yes/No/Not Seen/Not Applicable)

5.7.3. Are test certificates available onboard for all items of loose lifting equipment including wire or webbing slings, shackles, eyebolts, etc? (Yes/No/Not Seen/Not Applicable)

Throughout the life of any piece of lifting equipment it must be accompanied by a valid certificate to show that it has been manufactured properly and, subsequently received thorough examination, to ensure continued integrity and fitness for safe use.
For small items of equipment such as small shackles, batch certificates may be issued.

5.7.5. Are cranes, derricks, pad eyes and other securing points clearly marked with their SWL? (Yes/No/Not Seen)

Safe Working Load (SWL) – the maximum load that the equipment may safely lift.
If it is not possible to mark the equipment with the SWL, a coding system or labels may be used.
If the SWL is dependent upon the configuration of the equipment, the SWL for each configuration should either be marked on the equipment or the information kept with the equipment where it is readily available to the operator, for example load-radius charts.
Where the SWL changes with the operating radius of the equipment, a load-limiting device may need to be fitted to inhibit the equipment and provide visual and/or audible warnings.
Any structural element of a piece of lifting equipment which can be separated from the equipment (boom section, slew ring, etc.) should be marked to indicate the equipment of which it is a part.
Where a number of accessories are brought together and not dismantled, for example a spreader beam with slings and shackles, the assembly should be marked to indicate its safety characteristics.
Lifting equipment and accessories should be marked with any relevant safety information such as the thickness of plates, which may be lifted with a plate clamp.
Lifting equipment designed for lifting persons should be marked as such and the carrier should display the SWL and maximum number of persons, which may be carried.

5.7.6. Are all items of lifting gear marked with a unique identification? (Yes/No/Not Seen/Not Applicable)

The equipment should be hard-stamped - e.g. ferrules on wire slings: affixed with a metal plate – e.g. chain hoist; or painted onto the equipment – e.g. runway beams.

5.7.7. Is a colour-coding or alternative system in use to identify inspected lifting equipment? (Yes/No/Not Seen/Not Applicable)

Check that it is being adhered to, i.e. no evidence of wrong colour/non-coded equipment in use, that non-coded/wrong colour equipment is segregated and access to same is denied.
Where there is more than one winch in a drilling derrick it may be possible for a winch, which has not been designated for man-riding, to be used for lifting of persons. In such a case all winches shall be clearly marked as either being suitable for lifting of persons or not.

5.7.9. Is there a procedure requiring that all lifting operations are properly planned? (Yes/No/Not Seen/Not Applicable)

The plan will need to address the risks identified during a risk assessment and should identify all resources, procedures and responsibilities necessary for safe operation.
The degree of planning will vary considerably depending on the type of lifting equipment and complexity of the lifting operation and degree of risk involved.
There are two elements to the plan: the suitability of the lifting equipment and the individual lifting operation to be performed.
As a means of minimising risk, the plan should consider the following areas:
• working under suspended loads
• breakdown in communication during blind lifting
• attaching/detaching the load
• environment and location
• proximity hazards
• lifting persons with non-dedicated equipment
• overloading
• pre-use checks by the operator
• deterioration in the condition of lifting accessories
• the experience, competence and training of all associated personnel.
Following a risk assessment and preparation of a standard instruction or procedure, the person using the equipment can normally plan routine lifts on an individual basis.
A routine plan should be reviewed on a regular basis to ensure that it remains valid.
For any lifting operation it is necessary to:

(a) ensure that a risk assessment is in place
(b) select suitable equipment for the range of tasks
(c) plan the individual lifting operation
Particular responsibilities are placed on the deck crew and crane operator to ensure that radio communication is maintained, especially during blind lifting.
Lifts utilising cranes, hoists, or other mechanical lifting devices should not commence unless:
• an assessment of the lift has been completed and the lift method and equipment has been determined by a competent person(s)
• operators of powered lifting devices are trained and certified for that equipment
• rigging of the load is carried out by a competent person(s)
• lifting devices and equipment have been certified for use within the last 12 months (at a minimum)
• the load does not exceed dynamic and/or static capacities of the lifting equipment
• any safety devices installed on lifting equipment are operational
• all lifting devices and equipment have been visually examined before each lift by a competent person(s)

5.7.10. Does the vessel/unit have a system in place for the quarantine of damaged or uncertified lifting equipment? (Yes/No/Not Seen/Not Applicable)

8. Offshore personnel transfer

5.8.1. Does the vessel/unit have documented personnel transfer and manriding procedures? (Yes/No/Not Seen/Not Applicable)

A risk assessment should be carried out to confirm that the equipment can be used safely.
· A means of communication must be provided between the passenger and the lifting equipment operator. May be hand signals but radio communication is preferred.
· The equipment must be manned at all times during person-lifting operations.
· Reliable means of rescue available in the event of equipment failure.
· Appropriate supervision is made available for the operations.
If a crane is to be used for lifting persons then the following must be in place:
· Free-fall capability lock-out
· Hoisting and lowering limiters
· Rated capacity indicator and limiter
· Schedule of daily inspections of the crane or winch and carrier by a competent person
· Adequate instruction for all persons involved – passenger, operator, supervisor, etc

5.8.2. Are all personnel transfer and manriding baskets subjected to an inspection and certification regime? (Yes/No/Not Seen/Not Applicable)

Sight certification and inspection records.

5.8.3. Have all personnel involved in lifting/man riding operations been suitably trained and certified to carry out such operations? (Yes/No/Not Seen/Not Applicable)

Does the crane operator have a man riding endorsement? Have the crew undergone special training from the company or third party?

9. Life saving appliances

5.9.1. Are vessel/unit-specific life-saving equipment training manuals available? (Yes/No/Not Seen)

A training manual shall be provided in each crew mess room and recreation room, or in each cabin. (SOLAS III/35.2)
The training manual shall contain instructions and information, in easily understood terms illustrated wherever possible, on the life-saving appliances provided in the vessel/unit and on the best methods of survival. Any part of such information may be provided in the form of audio-visual aids in lieu of the manual. The following shall be explained in detail:
- donning of lifejackets, immersion suits and anti-exposure suits;
- muster at assigned stations;
- boarding, launching and clearing the survival craft and rescue boats;
- method of launching from within survival craft;
- release from launching appliances;
- illumination in launching areas;
- use of all survival equipment;
- with the assistance of illustrations, the use of radio life-saving appliances;
- use of drogues;
- use of engine and accessories;
- recovery of survival craft and rescue boats, including stowage and securing;
- hazards of exposure and the need for warm clothing;
- best use of survival craft facilities in order to survive;
- methods of retrieval, including the use of helicopter gear;
- all other functions contained in the muster list and emergency instructions; and
- instructions for repair of the life saving appliances. (SOLAS III/35.3)

5.9.2. Are vessel/unit-specific life-saving equipment maintenance instructions available and are weekly and monthly inspections being carried out? (Yes/No/Not Seen/Not Applicable)

The following tests and inspections shall be carried out weekly and a report of the inspection shall be entered in the log-book:
- all survival craft, rescue boats and launching appliances shall be visually inspected to ensure that they are ready for use. The inspection shall include, but is not limited to, the condition of hooks, their attachment to the lifeboat and the on-load release gear being properly and completely reset;
- all engines in lifeboats and rescue boats shall be run for a total period of not less than 3 minutes, provided the ambient temperature is above the minimum temperature required for starting and running the engine. During this period of time, it should be demonstrated that the gearbox and gearbox train are engaging satisfactorily. If the special characteristics of an outboard motor fitted to a rescue boat would not allow it to be run other than with its propeller submerged for a period of 3 minutes, it should be run for such a period as prescribed in the manufacturer's handbook. In special cases, the Administration may waive this requirement for ships constructed before 1 July 1986;
- lifeboats, except free-fall lifeboats, on cargo ships shall be moved from their stowed position, without any persons on board, to the extent necessary to demonstrate satisfactory operation of launching appliances, if weather and sea conditions so allow;
- and the general emergency alarm shall be tested. (SOLAS III/20.6)
All lifeboats, except free-fall lifeboats, shall be turned out from their stowed position, without any persons on board if weather and sea conditions so allow.(SOLAS III/20.7.1)
Monthly inspections. Inspection of the life-saving appliances, including lifeboat equipment, shall be carried out monthly using the checklist required by regulation 36.1 to ensure that they are complete and in good order. A report of the inspection shall be entered in the log-book. (SOLAS III/20.7.2)
Instructions for on-board maintenance shall be easily understood, illustrated wherever possible and as appropriate, shall include for each appliance:
- a checklist for use when carrying out the monthly inspections required by SOLAS III/20.7.2 and III/36.1;
- maintenance and repair instructions;
- a schedule of periodic maintenance;
- a diagram of lubrication points with the recommended lubricants;
- a list of replaceable parts;
- a list of sources of spare parts; and
- a log for records of inspections and maintenance. (SOLAS III/36)

5.9.3. Are muster lists displayed onboard? (Yes/No/Not Seen/Not Applicable)

Muster lists and emergency instructions shall be exhibited in conspicuous places throughout the vessel/unit including the navigation bridge, engine room and crew accommodation spaces. (SOLAS III/8.3)
The muster list shall show the duties assigned to the different members of the crew including:
- closing of the watertight doors, fire doors, valves, scuppers, side scuttles, portholes and other similar openings in the ship;
- equipping of the survival craft and other life-saving appliances;
- preparation and launching of survival craft;
- general preparations of other life-saving appliances;
- muster of passengers;
- use of communication equipment;
- manning of fire parties assigned to deal with fires; and
- special duties assigned in respect to the use of fire-fighting equipment and installations. (SOLAS III/37.3)
The muster list shall specify which officers are assigned to ensure that life-saving and fire appliances are maintained in good condition and ready for immediate use. (SOLAS III/37.4)
The muster list shall specify substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions. (SOLAS III/37.5)
The muster list shall be prepared before the vessel/unit proceeds to sea. (SOLAS III/37.7)

5.9.6. Is there a procedure in place for the periodic inspection of davits, fall wires and brake mechanisms? (Yes/No/Not Seen/Not Applicable)

Check the PMS includes these items and addresses the periodic replacement of fall wires.

5.9.7. Are lifeboat (if fitted) and liferaft operating instructions displayed? (Yes/No/Not Seen/Not Applicable)

Posters or signs shall be provided on or in the vicinity of survival craft and their launching controls shall:
- illustrate the purpose of the controls and the procedures for operating the appliance and give relevant instructions or warnings;
- be easily seen under emergency lighting conditions; and
- use symbols in accordance with resolution A.760, as amended by MSC.82. (SOLAS III/9.2)

5.9.10. Are liferafts in good order? (Yes/No/Not Seen/Not Applicable)

5.9.11. Are hydrostatic releases, where fitted, correctly attached and in good order? (Yes/No/Not Seen/Not Applicable)

Every liferaft shall be stowed with its painter permanently attached to the ship. (SOLAS III/13.4.1)
Each liferaft or group of liferafts shall be stowed with a float-free arrangement so that each floats free and if inflatable, inflates automatically when the ship sinks. (SOLAS III/13.4.2)
Liferafts shall be so stowed as to permit manual release of one raft or container at a time from their securing arrangements. (SOLAS III/13.4.3)
Note: Some hydrostatic release manufacturers recommend that each liferaft is fitted with its own individual hydrostatic release unit (HRU), to prevent the possibility, where more than one liferaft is utilising the same release, of one of the liferafts breaking the weak link before the second or subsequent liferafts have inflated. Where more than one liferaft is attached to a single HRU, each of the rafts must be fitted with its own weak link. Liferafts

stowed in the forward part of the vessel do not require a HRU.

5.9.12. Are survival craft portable VHF radios and Search and Rescue Radar Transponders (SART's) in good order and charged? (Yes/No/Not Seen/Not Applic

At least 3 two-way VHF radiotelephone apparatus shall be provided on every cargo ship of 500 gross tonnage and upwards. (SOLAS III/6.2.1.1)
The two-way radiotelephone should be capable of operation on the frequency 156.800 MHz (VHF channel 16) and on at least one additional channel. (Res. A.890/3.1)
The source of energy should be integrated in the equipment and may be replaceable by the user. In addition, provision may be made to operate the equipment using an external source of electrical energy. (Res. A.890/12.1)
Equipment for which the source of energy is intended to be user-replaceable should be provided with a dedicated primary battery for use in the event of a distress situation. This battery should be equipped with a non-replaceable seal to indicate that it has not been used. (Res. A.890/12.2)
Equipment for which the source of energy is intended to be non-user-replaceable should be provided with a primary battery. The portable two-way radiotelephone equipment should be fitted with a non-replaceable seal to indicate that it has not been used. (Res. A.890/12.3)
At least one radar transponder shall be carried on each side of every cargo ship of 500 gross tonnage and upwards. The radar transponders shall be stowed in such locations that they can be rapidly placed in any survival craft (other than the forward liferaft). On ships equipped with free-fall lifeboats, one of the transponders shall be stowed in the free-fall lifeboat and the other located in the immediate vicinity of the navigation bridge so that it can be utilised on board and ready to transfer to any other survival craft. (SOLAS III/6.2.2)
Note: The requirements for survival craft two-way VHF radios are contained in IMO Res. A.809(19).

5.9.13. Are lifebuoys, lights, buoyant lines, quick release mechanisms and self-activating smoke floats in good order? (Yes/No/Not Seen)

Cargo ships shall carry not less than the following numbers of lifebuoys:
- under 100 metres in length – 8;
- between 100 metres and under 150 metres – 10;
- between 150 metres and under 200 metres – 12;
- 200 metres and over – 14. (SOLAS III/32.1.1)

Lifebuoys shall be:
- so distributed as to be readily available on both sides of the ship and as far as practicable on all open decks extending to the ship's side;
- at least one shall be placed in the vicinity of the stern; and
- so stowed as to be capable of being rapidly cast loose and not permanently secured in any way. (SOLAS III/7.1.1)

At least one lifebuoy on each side of the ship shall be fitted with a buoyant line, equal in length to not less than twice the height at which it is stowed above the waterline in the lightest seagoing condition, or 30 metres, whichever is the greater. (SOLAS III/7.1.2)
Not less than one half of the total number of lifebuoys shall be provided with self-igniting lights;
Not less than two of these shall also be provided with lifebuoy self-activating smoke signals capable of quick release from the navigating bridge;
Lifebuoys with lights and those with lights and smoke signals shall be distributed equally on both sides of the ship and shall not be the lifebuoys provided with lifelines. (SOLASIII/7.1.3)
Lifebuoys intended to operate the quick-release arrangement provided for the self-activated smoke signals and self-igniting lights shall have a mass sufficient to operate the quick release arrangement. (LSA Code II/2.1.1.7)

5.9.14. Are lifejackets in good order? (Yes/No/Not Seen)

A lifejacket shall be provided for every person on board and, in addition, a sufficient number of lifejackets shall be carried for persons on watch and for use at remotely located survival craft stations. The lifejackets carried for persons on watch should be stowed on the bridge, in the engine control room and at any other manned watch station. (SOLAS III/7.2.1)
The lifejackets used in totally enclosed lifeboats, except free-fall lifeboats, shall not impede entry into the lifeboat or seating including operation of the seat belts in the lifeboat. (SOLAS III/7.2.3)
Lifejackets selected for free-fall lifeboats and the manner in which they are carried or worn, shall not interfere with entry into the lifeboat, occupant safety or operation of the lifeboat. (SOLAS III/7.2.4)
Make an Observation if more than one type of lifejacket is carried on board.

5.9.15. Are lifejacket donning instructions displayed? (Yes/No/Not Seen)

Ensure instructions include all types of lifejacket carried on board.

5.9.16. If vessel is outfitted with immersion suits, are the immersion suits in a satisfactory condition? (Yes/No/Not Seen/Not Applicable)

An immersion suit or an anti-exposure suit, of an appropriate size, shall be provided for every person assigned to crew the rescue boat. If the ship is constantly engaged in warm climates where, in the opinion of the Administration thermal protection is unnecessary, this protective clothing need not be carried (SOLAS III/7.3)
An immersion suit complying with the requirements of section 2.3 of the LSA Code shall be provided for every person on board the ship. These immersion suits need not be required if the ship is constantly engaged on voyages in warm climates where, in the opinion of the Administration, immersion suits are unnecessary. (SOLAS III/32.3.2)
If a ship has any watch or work stations which are located remotely from the place or places where immersion suits are normally stowed, additional immersion suits shall be provided at these locations for the number of persons normally on watch or working at those locations at any time. (SOLAS III/32.3.3)

5.9.17. Are pyrotechnics, including line throwing apparatus, in date and in good order? (Yes/No/Not Seen/Not Applicable)

Not less than 12 rocket parachute flares shall be carried and be stowed on or near the navigation bridge. (SOLAS III/6.3)

A line throwing appliance complying with the requirements of section 7.1 of the Code shall be provided. (SOLAS III/18)
An illustrated table describing the life-saving signals shall be readily available to the officer of the watch. (SOLAS V/29)

5.9.18. Are the locations of life saving appliances marked with IMO symbols? (Yes/No/Not Seen/Not Applicable)

Containers, brackets, racks and other similar stowage locations for life-saving equipment shall be marked with symbols in accordance with IMO Res. A.760(18) indicating the devices stowed in that location for that purpose. If more than one device is stowed in that location, the number of devices shall also be indicated. (SOLAS III/20.10)

10. Fire-fighting

5.10.2. Are vessel/unit-specific fire safety operational booklets available? (Yes/No/Not Seen/Not Applicable)

The fire safety operational booklet shall contain the necessary information and instructions for the safe operation of the ship and cargo handling operations in relation to fire safety. The booklet shall include information concerning the crew's responsibilities for the general fire safety of the ship while loading and discharging cargo and while under way. The booklet shall also provide reference to the pertinent fire-fighting and emergency cargo handling instructions contained in the IBC Code, the IGC Code and the IMDG Code, as appropriate. (SOLAS II-2/16.2.1)
The fire safety operational booklet shall also include provisions for preventing fire spread to the cargo area due to ignition of flammable vapours and include procedures for cargo tank gas-purging and/or gas-freeing. (SOLAS II-2/16.3.1)
The fire safety operational booklet shall be provided in each crew mess room and recreation room, or in each crew cabin. (SOLAS II-2/16.2.2)
The booklet shall be written in the working language of the ship. (SOLAS II-2/16.2.3)
The booklet may be combined with the fire training manual. (SOLAS II-2/16.2.4)

5.10.3. Are vessel/unit-specific fire fighting equipment maintenance instructions available and are weekly and monthly inspections being carried out? (Yes/No/Not Seen/Not Applicable)

Maintenance, testing and inspections shall be carried out based on the guidelines in MSC/Circ.850
The maintenance plan shall be kept on board the ship and shall be available for inspection. (SOLAS II-2/14.2.2.2)
The maintenance plan shall include at least the following fire protection systems and fire fighting systems and appliances, where installed:
- fire mains, fire pumps and hydrants, hoses, nozzles and international shore connections;
- fixed fire detection and fire alarm systems;
- fixed fire extinguishing systems and other fire extinguishing appliances;
- automatic sprinkler, fire detection and fire alarm systems;
- ventilation systems, including fire and smoke dampers, fans and their controls;
- emergency shutdown of fuel supply;
- fire doors, including their controls;
- general emergency alarm systems;
- emergency escape breathing devices;
- portable fire extinguishers, including spare charges;
- fire fighter's-outfits;
- inert gas systems;
- deck foam systems;
- fire safety arrangements in cargo pump rooms; and
- flammable gas detectors.
(SOLAS II-2/14.2.2.3) and 14.4)
The maintenance programme may be computer-based. (SOLAS II-2/14.2.2.4)

5.10.4. Are records available to show that samples of foam compound have been tested at regular intervals? (Yes/No/Not Seen/Not Applicable)

The first periodical control of medium expansion foam concentrates stored on board should be performed after a period of 3 years and, after that, every year. (MSC/Circ.798/5.1)
A record of the age of the foam concentrates and of subsequent controls should be kept on board. (MSC/Circ.798/5.2)

5.10.7. Are fire mains, pumps, hoses and nozzles in good order and available for immediate use? (Yes/No/Not Seen/Not Applicable)

Check that isolating valves in fire and foam system lines are clearly marked and in good order.

5.10.8. Is the International shore fire connection readily available externally and is the location clearly marked? (Yes/No/Not Seen/Not Applicable)

The connection shall be of steel or other suitable material. The connection shall be kept aboard the vessel/unit together with a gasket of any material suitable, with four 16 mm bolts, 50 mm in length and eight washers. (FSS Code 2.2)
If fixed on a vessel/unit, the connection should be accessible from both sides of the vessel/unit and its location should be clearly marked. The shore connection should be ready for use whenever a vessel/unit is in port.

5.10.9. Are fixed fire detection and alarm systems, if fitted, in good order and tested regularly? (Yes/No/Not Seen/Not Applicable)

Notes: There should be a procedure for whenever a zone of a fire detection system is isolated to ensure that relevant personnel are aware of the isolation and the reason for it and to ensure that the zone is reinstated as soon as possible.
The engine room should not be operated unmanned with any zone in the space isolated.

Spaces not covered by a fire detection system should be covered by regular fire patrols. Such patrols should not utilise the bridge lookout during the hours of darkness.

5.10.10. Are fixed fire extinguishing systems, where fitted, in good order and are clear operating instructions posted? (Yes/No/Not Seen/Not Applicable)

Check that relevant crew are familiar with operating procedures.

5.10.11. Is the emergency fire pump in full operational condition and are starting instructions clearly displayed? (Yes/No/Not Seen/Not Applicable)

Consistent with safety and without interfering with the vessel/unit's operations, request to witness the starting and operation of the emergency fire pump.
If a priming system has been fitted to the emergency fire pump, it must be class approved.

5.10.12. Are portable fire extinguishers in good order with operating instructions clearly marked? (Yes/No/Not Seen)

Each extinguisher should be clearly marked with the following minimum information:
- name of the manufacturer;
- type of fire for which the extinguisher is suitable;
- type and quantity of extinguishing medium;
- approval details;
- instructions for use and recharge (it is recommended that operating instructions be given in pictorial form);
- year of manufacture;
- temperature range over which the extinguisher will operate satisfactorily; and
- test pressure. (FSS Code 4 and Res. A.602)

One of the portable fire extinguishers intended for use in any space shall be stowed near the entrance to that space. (SOLAS 2004 II-2/10.3.2.2)
For vessels constructed after 1st July 2002, spare charges shall be provided for 100% of the first ten extinguishers and 50% of the remaining fire extinguishers capable of being recharged on board. Not more than sixty total spare charges are required. Instructions for recharging shall be carried on board. (SOLAS 2004 II-2/10.3.3.1)
For fire extinguishers which cannot be recharged on board, additional portable fire extinguishers of the same quantity, type, capacity and number shall be provided in lieu of spare charges. (SOLAS 2004 II-2/10.3.3.2)
For vessels constructed before 1st July 2002, spare charges shall be provided in accordance with requirements specified by the Administration. (SOLAS 1974 II-2/6.2)
Note: Portable fire extinguishers must be hydrostatically tested every 10 years or lesser period if so required by the Administration. The date of the hydrostatic test must be stamped on the cylinder.
Certain administrations may have their own requirements for the carriage of portable extinguishers and spare charges.

5.10.13. Are firemen's outfits and breathing apparatus in good order, provided with fully charged cylinders and ready for immediate use? (Yes/No/Not Seen/Not Applicable)

A number of spare charges, suitable for use with the apparatus provided, shall be available on board to the satisfaction of the Administration. (SOLAS 74 II-2/17.1.2.2)
Two spare charges shall be provided for each required breathing apparatus……cargo ships that are equipped with suitably located means for fully recharging the air cylinders free from contamination need carry only one spare charge for each required apparatus. (SOLAS 2004 II-2/10.2.5)
For vessels constructed before 1st July 2002, the breathing apparatus may be either a smoke helmet type, or a self-contained compressed air type. A number of spare charges suitable for use with the apparatus provided shall be available on board to the satisfaction of the Administration. (SOLAS 1974 II-2/17.1.2)
The outfits shall be kept ready for use in an easily accessible location that is permanently and clearly marked and, they shall be stored in widely separated positions. (SOLAS 1974 II-2/17.4 and SOLAS 2004 II-2/10.3.1)
Notes: Although SOLAS recommends 'widely separated positions', fire-fighting training advocates that breathing apparatus should be used by personnel in pairs.
Self-contained breathing apparatus should be checked for condition and satisfactory operation. With the apparatus charged and the cylinder valve closed, the drop in pressure should not be more than10 bars in one minute. (Manufacturer's instructions)
Annual inspections should be carried out to ensure that the air quality of breathing apparatus air recharging systems is satisfactory. (MSC/Circ.850)
Breathing apparatus shall be a self-contained compressed air-operated breathing apparatus for which the volume of air contained in the cylinders shall be at least 1,200 l, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 min. All air cylinders for breathing apparatus shall be interchangeable. (FSS Code 3.2.1.2)
Notes: Air cylinders should be charged to not less than 10% below full. BA air cylinders should be hydrostatically tested every 5 years or lesser period if so recommended by the manufacturer. (4-Year testing intervals are customary for some composite wound cylinders.) The hydrostatic test date must be stamped on the cylinder.

5.10.14. If fitted, are emergency escape breathing devices (EEBD's) in good order and ready for immediate use? (Yes/No/Not Seen/Not Applicable)

All ships shall carry at least two emergency escape breathing devices within accommodation spaces. (SOLAS II-2/13.3.4.2)
On all ships, within the machinery spaces, emergency escape breathing devices shall be situated ready for use at easily visible places, which can be reached quickly and easily at any time in event of fire. The location of EEBD's shall take into account the layout of the machinery space and the number of persons normally working in the spaces. (SOLAS II-2/13.4.3.1)
Spare emergency escape breathing devices shall be kept on board. (SOLAS II-2/13.3.4.1)

Training in the use of the EEBD should be considered a part of basic safety training. (MSC/Circ.849)
Note: The requirements for EEBD's are contained in Chapter 3/2.2 of the FSS Code and MSC/Circ.849 and among other measures or definitions, stipulate:
- an EEBD is a supplied air or oxygen device only used for escape from a compartment that has a hazardous atmosphere and shall be of an approved type.
- EEBDs shall not be used for fighting fires, entering oxygen deficient voids or tanks, or worn by fire-fighters. In these events, a self-contained breathing apparatus, which is specifically suited for such applications, shall be used.
- the EEBD shall have a service duration of at least 10 min. The EEBD shall include a hood or full face piece, as appropriate, to protect the eyes, nose and mouth during escape.
- hoods and face pieces shall be constructed of flame-resistant materials and include a clear window for viewing.
- an inactivated EEBD shall be capable of being carried hands-free.
- an EEBD, when stored, shall be suitably protected from the environment.
- brief instructions or diagrams clearly illustrating their use shall be clearly printed on the EEBD. The donning procedures shall be quick and easy to allow for situations where there is little time to seek safety from a hazardous atmosphere.
- maintenance requirements, manufacturer's trademark and serial number, shelf life with accompanying manufacture date and name of the approving authority shall be printed on each EEBD.
- all EEBD training units shall be clearly marked.

5.10.15. Are accommodation and ventilation fan emergency stops in good order and clearly marked to indicate the spaces they serve? (Yes/No/Not Seen/Not Applicable)

5.10.16. Are fire flaps in good order and clearly marked to indicate the spaces they serve? (Yes/No/Not Seen/Not Applicable)

11. Access

5.11.2. Where the vessel/unit is not fitted with a helideck, and Chapter 8.14 is not applicable, does the vessel/unit have a set of procedures/guidance for helicopter winching operations in the event that they may need to be enacted? (Yes/No/Not Seen/Not Applicable)

There should be a plan in place for possible medivac or other abnormal operation involving helicopter transfer of goods or personnel by winch. Factors addressed should include location on deck for winch drop, personnel involved, communications protocol and recommended equipment ref. ICS Guide to Helicopter/Ship Operations.

12. Additional comments

5.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

6. Pollution prevention and environmental management

1. Pollution prevention

6.1.1. Is the Engine Room (Part I) Oil Record Book (ORB) and, if applicable, Part 2, correctly completed? (Yes/No/Not Seen/Not Applicable)

Notes: The IOPP Form A (2.2) indicates whether a vessel is fitted with a 15 ppm oily water separator and 15 ppm oil content meter fitted with an alarm and automatic stopping device. Discharge of bilges or transfer from a bilge holding tank to overboard through this equipment should be recorded in section D of the ORB. Section E should be used ONLY in cases where automatic starting systems that are activated by float switches in bilge wells or bilge holding tanks.
ORB entries should be signed (not initialled) and each completed page should be signed by the Master.

6.1.3. Is the Oil Record Book free of any pollution incidents or violations? (Yes/No/Not Seen/Not Applicable)

6.1.4. If the disposal of engine room oily water or sludge to a shore facility has taken place, has the event been recorded in the Engine Room Oil Record Book, did the vessel/unit receive a statement or certificate of disposal from the shore facility and did it (Yes/No/Not Seen/Not Applicable)

6.1.5. Are thruster seals free of hydraulic leaks? (Yes/No/Not Seen/Not Applicable)

6.1.6. Are there adequate containment arrangements fitted around hydraulic machinery in case of leaks? (Yes/No/Not Seen/Not Applicable)

2. Shipboard oil and marine pollution emergency plans

3. Bulk liquid transfers

6.3.1. Is there evidence of a pre-transfer conference being held between the vessel/unit and the receiving facility before the transfer of Bulk Liquids begins? (Yes/No/Not Seen/Not Applicable)

6.3.2. Are spill containment arrangements provided in way of bulk transfer manifolds? (Yes/No/Not Seen/Not Applicable)

If not permanent, comment on temporary arrangements provided.

6.3.3. Are manifold spill containers, if provided, empty and are the drainage arrangements satisfactory? (Yes/No/Not Seen/Not Applicable)

6.3.4. If carried, are the hoses and connections used for the transfer of bulk liquids free of defects? (Yes/No/Not Seen/Not Applicable)

6.3.5. If carried, are all transfer hoses routinely tested? (Yes/No/Not Seen/Not Applicable)

Records to be sighted confirming regular tests for pressure, elongation and conductivity.

6.3.6. Are transfer hoses fitted with lifting saddles and stowed in racks? (Yes/No/Not Seen/Not Applicable)

4. Ballast water management

5. Waste management

6.5.1. Does the vessel/unit have a garbage management plan and has garbage been handled and disposed of in accordance with MARPOL? (Yes/No/Not Seen/Not Applicable)

Every ship of 400 gross tonnage and above, and every ship which is certified to carry 15 persons or more, shall carry a garbage management plan which the crew shall follow. (MARPOL Annex V/9.2)
Every ship shall display placards which notify the crew of the disposal requirements of garbage. (MARPOL Annex V/9.1.a)
The placards shall be written in the working language of the ship's personnel and, for ships engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, shall also be in English, French or Spanish. (MARPOL Annex V/9.1.b)
When garbage is mixed with other discharges having different disposal or discharge requirements the more stringent requirements shall apply. (MARPOL Annex V/5.3)
Waste receptacles should be constructed of non-combustible materials with no openings in the sides or bottom. (SOLAS 2004 II-2/4.4.2)
The disposal into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets, plastic garbage bags and incinerator ashes from plastic products which may contain toxic or heavy metal residues, is prohibited;(MARPOL Annex V/3.1(a))
The storage locations for garbage should be carefully selected to ensure that the garbage presents no potential hazard to adjacent spaces. Particular consideration should be given to the storage of garbage that is designated as ‘special waste’, such as batteries, sensors and fluorescent tubes, to ensure that only compatible materials are stowed together.

6.5.2. Does the Garbage Management Plan include procedures for collecting, storing, processing and disposing of garbage? (Yes/No/Not Seen/Not Applicable)

6.5.3. Has the Garbage Record Book been correctly completed? (Yes/No/Not Seen/Not Applicable)

The Garbage Record Book, whether as a part of the ship's official log-book or otherwise, shall be in the form specified in the appendix to this Annex; (MARPOL Annex V9/3)
(a) each discharge operation, or completed incineration, shall be recorded in the Garbage Record Book and signed for on the date of the incineration or discharge by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the master of the ship. The entries in the Garbage Record Book shall be at least in English, French or Spanish. Where the entries are also made in an official language of the State whose flag the ship is entitled to fly, these entries shall prevail in case of a dispute or discrepancy;
(b) the entry for each incineration or discharge shall include date and time, position of the ship, description of the garbage and the estimated amount incinerated or discharged;
(c) the Garbage Record Book shall be kept on board the ship and in such a place as to be available for inspection in a reasonable time. This document shall be preserved for a period of two years after the last entry is made on the record; (MARPOL Annex V 9/3)
Note: receipts for garbage landed ashore should be retained and filed on board.

6.5.4. Are controls in place to ensure that sewage treatment plant discharges comply with MARPOL or local requirements? (Yes/No/Not Seen/Not Applicable)

Alternatively, holding tank arrangements shall be provided to facilitate disposal ashore.

6. Additional comments

6.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

7. Structural condition

1. General

7.1.1. Is the hull free from visible structural defects that warrant further investigation? (Yes/No/Not Seen)

Inspection of the hull should include checking for any evidence of structural problems including collision/jetty contact damage or distortion from heavy weather.

7.1.2. Are weather decks free from visible structural defects that warrant further investigation? (Yes/No/Not Seen)

Inspection of weather decks should include checking for any evidence of wastage, structural problems including evidence of contact damage or distortion from heavy weather

7.1.4. Is the superstructure free from visible structural defects that warrant further investigation? (Yes/No/Not Seen/Not Applicable)

7.1.5. Are internal spaces free from visible structural defects that warrant further investigation? (Yes/No/Not Seen/Not Applicable)

7.1.6. If there has been any significant structural damage to the vessel/unit, have repairs been undertaken to the satisfaction of an attending Class surveyor? (Yes/No/Not Seen/Not Applicable)

Class records should be examined to confirm that class has been involved whenever significant damage has occurred or been repaired.

7.1.7. If the vessel has any through-hull penetrations, are they in good order and subjected to Class approval? (Yes/No/Not Seen/Not Applicable)

State type, number and location
Check that procedures are available for raising and lowering of poles and that the operation is covered by a permit to work.
Check that the planned maintenance system covers the checking and maintenance of gate valves, top plate assembly, watertight doors, bilge alarms and suctions.

2. Stability

7.2.1. Is there a competent person responsible for cargo and ballast operations? (Yes/No/Not Seen)

Calculations should include; operational activities and transits.
Check and comment on any anomalies.

7.2.3. Is an approved stability book available onboard that includes both intact and damage stability scenarios? (Yes/No/Not Seen/Not Applicable)

State approving entity - Class or Flag State.
Some administrations may permit this information to be provided in the form of a simplified stability letter.
Scenarios should cover likely credible events, including collision and hull breach.

7.2.6. Does the vessel/unit have any known stability limitations as noted in the stability book? (Yes/No/Not Seen)

Depending on vessel/unit type, free surface effects may differ widely. Check for any limitations in number of slack tanks noted in stability booklet and that personnel responsible for ballast control and stability are aware of the limitations.

7.2.7. Is there a system of verifying and recording the calibration of tank gauging systems and level alarms ? (Yes/No/Not Seen/Not Applicable)

Tanks should be manually sounded at least once per week and compared to remote reading gauges. Discrepancies should be recorded and available to the BCO. Ensure that sounding tubes are not blocked and that sounding pipes are marked indicating the tank served and are fitted with a cap.

3. Structural modifications

4. Additional comments

7.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

8. Operations

19. Large crew boats

8.19.4. Have noise levels been assessed? (Yes/No/Not Seen)

8.19.5. Has the Vessel Motion Sickness Index, or equivalent, been calculated? (Yes/No/Not Seen)

8.19.6. Are passenger cabin facilities suitable for the task? (Yes/No/Not Seen)

For example, fitted with aircraft style seats, safety belts, air-con, entertainment systems, toilet/wash facilities, smoking facilities, refreshments.

8.19.7. Are crew specifically trained for crew boat operations? (Yes/No/Not Seen)

For example, passenger transfer/control and evacuation. Additional STCW requirements for HSC.
Induction and Safety Briefing videos.

8.19.8. Are effective security procedures in place? (Yes/No/Not Seen)

8.19.9. Do procedures exist for personnel transfer and transit operations and define safe access routes? (Yes/No/Not Seen)

Including, for example, definition of safe access routes, segregation of passengers (ongoing and offgoing) and cargo, provision of handrails, deck marks, non-slip coatings, target area for frog/basket.

8.19.10. Is there a gated bulwark in way of personnel transfer areas? (Yes/No/Not Seen)

8.19.11. Are there lifebuoys and a man-overboard alarm on the personnel transfer deck? (Yes/No/Not Seen)

8.19.12. Are sufficient immersion suits or thermal protective aids carried? (Yes/No/Not Seen/Not Applicable)

Depends on location. Covering crew and passengers.

8.19.13. Are passengers given a pre-embarkation and pre-disembarkation briefing? (Yes/No/Not Seen)

Passengers given specific briefing on do's and don'ts, signs posted, etc.
Covering method of disembarkation, e.g. Surfer landing, Frog, Billy Pugh etc.

8.19.14. If a Passenger Evacuation System is fitted, is it in good order? (Yes/No/Not Seen/Not Applicable)

Record date last serviced.

8.19.15. Has a passenger evacuation exercise been conducted? (Yes/No/Not Seen)

Record date of last exercise.

8.19.16. Are emergency alarms audible in the passenger accommodation areas? (Yes/No/Not Seen)

8.19.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

9. Mooring

1. General

9.1.2. Are there records of the inspection and maintenance of mooring ropes, wires and equipment? (Yes/No/Not Seen)

Records should be kept of date placed in use, inspections, and any maintenance.

9.1.3. Are there sufficient competent marine crew to conduct safe mooring operations? (Yes/No/Not Seen)

Crewing levels should take into account all mooring scenarios. On barges, rigs, etc., mooring operations may take days to complete.

2. Mooring procedures.

9.2.1. Are moorings satisfactorily deployed and tended, taking into account anticipated conditions? (Yes/No/Not Seen/Not Applicable)

Generally mooring lines of the same size and type (material) should be used for all leads. Mooring lines should be arranged so that all lines in the same service are about the same length.
Note: The mooring arrangement in use for the port and its effectiveness should be reviewed. Breast lines provide the bulk of transverse restraint, back springs the longitudinal. Headlines and stern lines contribute much less to the mooring strength than is commonly supposed.

9.2.2. Are mooring lines secured to bitts turned up correctly? (Yes/No/Not Seen/Not Applicable)

The recommended method of turning up a rope on bitts is to take one or two full turns around the leading post before figure of eighting . The reason for this is to reduce the tendency to pull the two posts together.
However when turning up unjacketed high modulus lines around bitts, for example when a tug's line fast, two turns should be taken around the leading post prior to turning the line up in a figure of eight fashion.
Note: Mooring lines must not be secured to winch warping drums.

9.2.5. Are all mooring lines stowed neatly to minimise tripping hazards and are mooring areas clear and unobstructed? (Yes/No/Not Seen)

Mooring ropes should be stowed on a grating away from chemicals and out of direct sunlight.

9.2.7. If the vessel/unit is equipped with fenders for mooring alongside, are they in good condition? (Yes/No/Not Seen/Not Applicable)

Including the fender mooring pennants and pickup arrangements.

3. Equipment

9.3.2. Are mooring wires and ropes in good order? (Yes/No/Not Seen)

Notes: Splicing of ropes is acceptable, but reduces the strength of the rope by about 10%. Splices in eyes and for repairs should have a minimum of 5 tucks.
Particular attention should be paid to the eyes of mooring wires. If there are more than three broken wires in any strand, or five in any adjacent strands in a length of wire 10 times the diameter, the damaged part
requires removal and the wire re-splicing.
There should be a routine for the maintenance of wires and the lubrication of them using a preservative which will effectively penetrate the strands and wires.

9.3.3. Are pedestal fairleads, roller fairleads and other rollers well greased and free to turn and are bitts and chocks free of grooving? (Yes/No/Not Seen/Not Applicable)

9.3.4. Are sufficient closed fairleads available for 'ship-to-ship' mooring? (Yes/No/Not Seen/Not Applicable)

4. Anchoring equipment

9.4.1. Are windlasses, anchors, locking bars and cables in a satisfactory condition and operating effectively? (Yes/No/Not Seen/Not Applicable)

Note: The condition of the locking bars should be checked to ascertain that they function correctly by locking the chain when the vessel/unit is at anchor to prevent the brake having to take the full load of the cable.

9.4.2. If fitted, are chain locker doors securely battened down? (Yes/No/Not Seen/Not Applicable)

9.4.3. If fitted, are spurling pipes normally secured to prevent water ingress? (Yes/No/Not Seen/Not Applicable)

5. Spread mooring

6. Barge mooring

7. Additional comments

9.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

10. Communications

1. General

10.1.2. Are the vessel/unit's call sign and Inmarsat ship station identity clearly marked on the radio installation? (Yes/No/Not Seen/Not Applicable)

10.1.3. Can officers demonstrate a satisfactory understanding of how to operate communications equipment in an emergency? (Yes/No/Not Seen)

10.1.4. Is a continuous listening watch maintained on VHF channel 16? (Yes/No/Not Seen)

10.1.6. Has the AIS been programmed with up-to-date voyage information? (Yes/No/Not Seen/Not Applicable)

10.1.7. Are officers aware of the function of the ship security alert system and how to operate it? (Yes/No/Not Seen/Not Applicable)

Under no circumstances should enquiries be made as to the system details or location of activation points.
All ships constructed after 1st July 2004 shall be fitted with a ship security alert system. (SOLAS XI-2/6.1.1)
The ship security alert system shall, when activated, initiate and transmit a ship-to-shore security alert to a competent authority, which in these circumstances may include the Company*, identifying the ship, its location and indicating that the security of the ship is under threat or it has been compromised. (SOLAS XI-2/6.2.1)
It shall not send the security alert to other ships or raise the alarm on board and it shall continue until deactivated or reset. (SOLAS XI-2/6.2.2,3 and 4)
The ship security alert system shall be capable of being activated from the navigation bridge and in at least one other location. (SOLAS XI-2/6.3.1)
* Note: OVID defines Company as the vessel Operator.

10.1.8. Has a qualified person been designated to handle distress communications? (Yes/No/Not Seen)

Every ship shall carry personnel qualified for distress and safety radiocommunication purposes to the satisfaction of the Administration. (SOLAS IV/16.1)
Note: That person should not be the master.

10.1.9. Are periodical tests of communications equipment carried out and recorded as required? (Yes/No/Not Seen/Not Applicable)

The following tests should be carried out:
Daily:
• the proper functioning of the DSC facilities without radiation of signals;
• battery voltage checks;
• printers.
Weekly:
• the proper function of the DSC facilities by means of a test call when within communication range of a coast station;
• where the reserve source of energy is not batteries, the reserve source to be tested.
Monthly:
• each Emergency Position Indicating Radio Beacon (EPIRB) to be tested to determine its capability to operate properly using the means provided on the device and without using the satellite system;
• each marine search and rescue transponder (SART) using the in-built test facility and checked for security and signs of damage;
• the security and condition of all batteries providing a source of energy for any part of the radio installation;
• the condition of all aerials and insulators;
• each survival craft two-way VHF equipment, on a frequency other than channel 16.

10.1.10. Is the Radio Log being maintained correctly? (Yes/No/Not Seen/Not Applicable)

The following should be being recorded:
• a summary of distress, urgency and safety communications;
• important incidents relating to the radio service;
• where appropriate, the position of the ship at least once per day;
• a summary of the condition of the radio equipment, including its sources of energy;
• personnel assigned responsibility for sending a distress alert instructed to operate properly all radio equipment on the ship;
• necessary instruction and information on the use of the radio equipment to relevant crew members;
• pre-sailing checks to ensure that all equipment is in an efficient working condition;
• the results of the testing of the DSC distress and safety radio equipment by means of a test call at least once a week;
• the results of the testing of the distress and safety radio equipment by means of a test at least once each day but without radiating any signal;
• the on-load and off-load daily test of the batteries;
• the results of the weekly hydrometer or load test of the batteries;
• the results of the monthly security check of each battery and its connections.

10.1.11. If applicable, are radio emergency batteries in a satisfactory fully charged condition and the battery log completed up to date? (Yes/No/Not Seen/Not Applicable)

Where a reserve source of energy consists of rechargeable accumulator batteries, their capacity shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the ship is not at sea. (SOLAS IV/13.6)

2. Equipment

10.2.1. Is the communications equipment in good order? (Yes/No/Not Seen)

Notes: The minimum requirements for radio equipment for the vessel/unit should be taken from the Radio Certificate and its attachment Form R or in Form C if the Safety Radio Certificate is combined in the Harmonised Certificate. If the vessel/unit uses EX rated mobile phones within a gas-hazardous area confirm that proper certification is provided.

10.2.2. Is the satellite EPIRB fitted, armed and labelled correctly and inspected in accordance with the manufacturer's requirements? (Yes/No/Not Seen/Not App

The EPIRB shall be:
• capable of transmitting a distress alert through the polar orbiting satellite service operating in the 406 MHz band;"
• installed in an easily accessible position;
• ready to be manually released and capable of being carried by one person into a survival craft;
• capable of floating free if the ship sinks and of being automatically activated when afloat; and
• capable of being activated manually. (SOLAS IV/7.1.6)
Satellite EPIRBs shall be annually tested within 3 months before the expiry date, or 3 months before or after the anniversary date, of the Cargo Ship Safety Radio Certificate. The test may be conducted on board the ship or at an approved testing station; and subject to maintenance at intervals not exceeding five years, (SOLAS IV/15.9)
Notes: The vessel/unit's name, the serial number and the maritime mobile services identity (MMSI or 15 Hex ID) should be clearly indicated on the EPIRB.
The inspection of EPIRBs should include:
• inspection of the housing to ensure it is undamaged;
• inspection of the hydrostatic release unit to ensure it is in good order and in date. Releases should be renewed after two years;
• inspection of the lanyard, which should be neatly stowed and not attached to the vessel/unit;
• ensuring that the markings remain clearly decipherable;
• checking the battery to ensure it is in good order and in date. The battery life for most EPIRBs is 5 years;
• carrying out a self test. Most EPIRBs have a self test facility which is usually a spring-loaded switch.
When activated a light will indicate that the test circuits are operating correctly and sometimes this will also activate the strobe light. It is recommended that the self test switch be held for no more than 2 flashes of the strobe light, or no longer than 1 minute after the first self-test mode burst transmission.
When the self-test is activated on a 406 Mhz EPIRB, the EPIRB is allowed to radiate a single burst which is specially coded so that it is ignored by the COSPAS-SARSAT system.
The EPIRB must never be tested by actual operation. The annual testing of 406 MHz satellite EPIRBs required by SOLAS IV/15.9 requires test equipment capable of performing all the relevant measurements detailed in MSC/Circ 1040.

10.2.3. Is the vessel/unit equipped with sufficient portable radios for use on deck? (Yes/No/Not Seen/Not Applicable)

Note: Sufficient portable radios should be available to allow communications between the bridge/control rooms and all operational personnel.

10.2.5. Are there procedures for the use of communications equipment within 500 m/ safety zones? (Yes/No/Not Seen/Not Applicable)

Check that intrinsically safe portable radios are available for operations inside a 500 m zone of producing installations. GMDSS radios should not be utilised for this purpose.
Best practice is to utilise UHF, where possible.

3. Additional comments

10.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

11. Propulsion, power generation and machinery

1. Policies, procedures and documentation

11.1.1. Is the vessel/unit provided with adequate operator's instructions and procedures? (Yes/No/Not Seen)

Note: Engineering procedures should include at least the following:
- engine room organisation and operation;
- unmanned machinery space (UMS) operation, when applicable;
- reporting equipment deficiencies;
- engine room emergency preparedness and actions in the event of an emergency;
- ensuring that all essential engine room equipment is available and fully operational;
- planned maintenance;
- the control of spare parts.

11.1.8. Are there procedures to restart critical equipment? (Yes/No/Not Seen/Not Applicable)

Note: Written procedures should be readily available within the engine room which should be specific to the particular vessel/unit in order to identify relevant controls.

11.1.9. Are engineers familiar with restart procedures and are records available of exercises and drills? (Yes/No/Not Seen/Not Applicable)

11.1.13. Are detailed bunker transfer instructions available? (Yes/No/Not Seen/Not Applicable)

Notes: All bunkering operations should be carefully planned and executed. Records should include receipts for all fuels received. Samples should be drawn.
Personnel involved in the bunkering operation onboard should have no other tasks and should remain at their workstations during topping off. This is particularly important when bunkers are being loaded concurrent with cargo operations, so that conflicts of interest for operational personnel are avoided.
Planning of bunkering operations should include the following:
- determining that there is adequate space for the volume of bunkers to be loaded;
- the maximum filling volume; Controls for the setting of bunker system valves;
- determining loading rates for the start of loading, bulk loading and topping off;
- arrangements of bunker tank ventilation;
- internal tank overflow arrangements;
- verification of gauging system operation and accuracy;
- alarm settings on overfill alarm units;
- communication with the supplier to establish when bunkering can be undertaken;
- method of determining the temperature of the bunkers during loading;
- communications procedure for the operation, including emergency stop;
- changing over tanks during loading;
- containment arrangements and cleanup equipment to be available;
- manning requirement to execute the operation safely.
An MSDS should be received and reviewed for each bunker consignment.
It is preferable that a diagram of the fuel oil transfer piping be attached to the plan.
For LNG fuelled vessels check that:
- the required operations and maintenance manual is on board:
- personnel have necessary skills for gas bunkering operations;
- a plan exists for system maintenance and testing;
- the monitoring system is functioning;
- high and low pressure alarms are functioning;
- gas detection systems have been function tested and records maintained;
- emergency drills related to bunkering and LNG storage have been undertaken;
- a spill tray is in position in way of bunker manifold to contain any liquid spill.

11.1.15. In the case of UMS vessels, are machinery alarms and engineer's alarm systems regularly tested with results recorded? (Yes/No/Not Seen/Not Applica

11.1.16. Is the dead man alarm system, where fitted, in good order and used as required? (Yes/No/Not Seen/Not Applicable)

The personnel alarm should automatically give an alarm on the navigating bridge or in the officers' quarters as appropriate, if it is not reset from the machinery spaces in a period satisfactory to the Administration, but not exceeding 30 minutes. (IMO International Codes on Alarms and Indicators, 1995. 7.1.1)

2. Planned maintenance

11.2.1. Is a planned maintenance system in place, being followed and is it up to date? (Yes/No/Not Seen)

Notes: Although there is no specific requirement for any particular computer or paper-based planned maintenance system (PMS) to be provided, the

Company should establish procedures to ensure that the vessel/unit is maintained in conformity with the provisions of the relevant Regulations and with any additional requirements which may be established by the Company and specified in the ISM Code Section 10.1.
Inspectors must ascertain that a PMS is in place and that it is accurate, up to date, effective and maintained in accordance with the requirements of the ISM Code and the Operator's procedures. Responsible personnel should be able to demonstrate familiarity with the system. The planned maintenance programme should include:
- details of maintenance schedules whether carried out according to running hours or calendar period, or if condition monitoring is used as a substitute;
- details, referenced to equipment manufacturer's instructions or experience, of what maintenance is required;
- historical data on maintenance and repair work which has been carried out;
- spare parts inventory;
- any proposed major repairs or overhauls should have a completion schedule, with spare parts verified as being on board or on order.

11.2.2. Are items of critical equipment identified in the planned maintenance system? (Yes/No/Not Seen/Not Applicable)

11.2.3. Is a comprehensive and up to date inventory of spare parts being maintained? (Yes/No/Not Seen/Not Applicable)

Check that spare parts for critical equipment are specifically addressed.

3. Safety management

11.3.2. Are emergency escape routes clearly marked, unobstructed and adequately lit? (Yes/No/Not Seen/Not Applicable)

11.3.3. Is the level of lighting in all areas of the machinery spaces satisfactory? (Yes/No/Not Seen/Not Applicable)

11.3.4. Are vessel/unit's engine/boiler exhausts fitted with spark arresters for safe operation alongside installations/other vessels? (Yes/No/Not Seen/Not Applica

Procedures should be in place for regular checking and cleaning of spark arresters from accumulated soot.

11.3.5. Do records indicate the regular testing of emergency equipment? (Yes/No/Not Seen/Not Applicable)

Notes: Emergency equipment will include, where fitted, the emergency fire pump, main fire and foam pumps, emergency air compressor, emergency generator, emergency generator switchboard, emergency steering, quick closing valves, emergency stops, engineers alarms and bilge ejectors.
Testing of the emergency generator should be carried out under load, but to do this may require the vessel to be blacked out. This testing is not to be conducted during the inspection. Inspectors must establish that the operator has a requirement for this test and determine from records that it is carried out at least annually.
Where fitted, the emergency air compressor should be regularly tested to the starting pressure of the diesel generator. The emergency air reservoir should be permanently maintained at the required pressure.
Check individual training records to verify that training is carried out for the above emergency equipment.

11.3.6. Are machinery emergency stops and shut offs clearly marked and do records indicate that they have been regularly tested? (Yes/No/Not Seen)

Note: Emergency stops include ventilation fans, fuel pumps and the quick closing valves for fuel and lubricating oil tanks.

11.3.7. Are diesel engine high and low pressure fuel delivery pipes adequately jacketed or screened? (Yes/No/Not Seen/Not Applicable)

External high pressure fuel delivery lines between the high pressure fuel pumps and fuel injectors shall be protected with a jacketed piping system capable of containing fuel from a high pressure line failure. A jacketed pipe incorporates an outer pipe into which the high pressure fuel pipe is placed, forming a permanent assembly. The jacketed piping system shall include a means for collection of leakages and arrangements shall be provided for an alarm to be given of a fuel line failure. (SOLAS II-2/4.2.2.5.2)

11.3.8. Are diesel engine exhausts and other hot surfaces in the vicinity of fuel, diesel, lubricating and hydraulic oil pipes protected against spray? (Yes/No/Not Seen/Not Applicable)

Surfaces with temperatures above 2200C which may be impinged as a result of a leak from an oil system failure shall be properly insulated. (SOLAS II-2/4.2.2.6.1)
Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces. (SOLAS II-2/4.2.2.6.2)

11.3.9. Are hot surfaces, particularly diesel engines, free of any evidence of fuel, diesel and lubricating oil? (Yes/No/Not Seen)

Note: Lagging and insulation should be in good condition and free from oil.
If there is evidence of oil leakage or oil soaked lagging this must be recorded as an Observation.

11.3.13. Are the main switchboard, alternators and other electrical equipment satisfactorily protected from water spray? (Yes/No/Not Seen/Not Applicable)

If the main switchboard is not located in the engine control room or other protected location, record in Other comments, the measures that have been taken to protect it from water spray.
Note: Risk due to water spray in the event of failure of sea water pipes, including fire mains and hydrants, should be assessed.

11.3.14. Is deck insulation provided to the front and rear of medium power (i.e. 220V to 1000V) electrical switchboards and is it in a satisfactory condition? (Yes/No/Not Seen/Not Applicable)

Where necessary non-conducting mats or gratings shall be provided at the front and rear of the switchboard. (SOLAS II-1/45. 2)
Non-conducting deck coverings, such as non-conducting mats or gratings, suitable for the specific switchboard voltage should be installed for personnel protection at the front and rear of the switchboard and should extend the entire length of and be of sufficient width to suit, the operating space. (USCG 46 CFR 111.30-11)
Notes: The USCG requirements apply to switchboards exceeding 250 volts.
Some decks are made from insulating composite material and will not need extra insulation.

11.3.15. Are gauge glass closing devices on oil tanks of a self-closing, fail-safe type and not inhibited? (Yes/No/Not Seen/Not Applicable)

11.3.16. Are self-closing sounding devices to double bottom tanks in good order, closed and capped? (Yes/No/Not Seen/Not Applicable)

11.3.17. Are all items of moving machinery which may present a hazard provided with adequate guards? (Yes/No/Not Seen/Not Applicable)

11.3.18. Are workshop machine tools in a safe condition and is adequate eye protection available? (Yes/No/Not Seen/Not Applicable)

11.3.19. Is all loose gear in the machinery spaces, stores and steering compartment properly secured? (Yes/No/Not Seen)

11.3.20. Are chemicals properly stowed and are Material Safety Data Sheets available? (Yes/No/Not Seen)

Note: Protective equipment including a face shield, apron, gloves and an eye-wash should be provided at the place where chemicals are stored.

11.3.21. Are machinery spaces and steering compartments clean and free from obvious leaks and is the overall standard of housekeeping and fabric maintenance satisfactory? (Yes/No/Not Seen)

Note: Workshops, compressor rooms, chemical stores, spare gear stores, electricians store/workshop should be checked. Safety notices and signs appropriate to the specific compartments should be posted.'

11.3.22. Are bilge systems operational and bilges free of oil, rubbish and sediment? (Yes/No/Not Seen)

Note: Oily areas indicate a lack of adequate maintenance and cleanliness. However, a small amount of oil in savealls should not be considered unsatisfactory.

11.3.23. Are bilge high level alarm systems regularly tested and are records maintained? (Yes/No/Not Seen/Not Applicable)

Note: Inspectors should consider requesting that this critical alarm be tested in their presence. It should be borne in mind that most bilge alarms are fitted with time delays.

11.3.24. Are seawater pumps, sea chests and associated pipework in a satisfactory condition and free of hard rust and temporary repairs, particularly outboard of the ship-side valves? (Yes/No/Not Seen/Not Applicable)

Note: The condition of sea chests, sea water lines, storm valves and hull penetrations should be carefully checked to ensure that they are in good condition. Evidence of hard rust or deterioration should be recorded as an Observation.

11.3.25. Are valves and pipework marked or colour coded? (Yes/No/Not Seen/Not Applicable)

4. Machinery status

11.4.1. Are all items of main, auxiliary and emergency plant in good order and reported to be fully operational? (Yes/No/Not Seen)

Items of machinery may include:
- the main engine(s);
- auxiliary engines and generators;
- waste heat units;
- compressors, including main, instrument and emergency air compressors;
- purifiers and fuel oil handling equipment;
- sewage plant;
- bilge pumping arrangements and oily water separators;
- pipework, including steam, fuel, lubricating oil, seawater, sewage, drain and air pipes, etc;
- refrigeration and air conditioning machinery;
- hydraulic aggregate pumps;
- ventilation fans and trunking;
- stern tube and thruster sealing arrangements;
- burner, tubes, uptakes, exhaust manifolds and spark arrestors.

11.4.3. Are concise starting instructions for the emergency generator, where fitted, clearly displayed? (Yes/No/Not Seen/Not Applicable)

Each emergency generating set arranged to be automatically started shall be equipped with starting devices approved by the Administration with a stored energy capability of at least three consecutive starts. A second source of energy shall be provided for an additional three starts within 30 minutes unless manual starting can be demonstrated to be effective. (SOLAS II-1/44.2)
Notes: These instructions are not for the use of the qualified engineering personnel, but for others who might be required to start the generator in an emergency.

Where the emergency generator cannot be effectively started manually and the starting source relies on a single starter motor, then an alternative means of applying the “charge”, such as a duplicate starting system or spare starter motor, should be available

11.4.4. Where applicable, is the emergency generator fuel tank provided with sufficient fuel? (Yes/No/Not Seen/Not Applicable)

The generator should be capable of providing full load requirements for at least 18 hours. (SOLAS II-1/43.2)
Notes: This may not necessarily mean a full tank. A minimum quantity to provide sufficient fuel for this requirement should have been established.
If necessary, the emergency generator fuel tank should be charged with fuel designed for use in sub-zero temperatures. Every oil fuel pipe, which, if damaged, would allow oil to escape from a storage, settling or daily service tank situated above the double bottom, shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position outside the space concerned in the event of a fire occurring in the space in which such tanks are situated. (SOLAS 74 II-2/15.2.5)
Oil fuel pipes, which if damaged would allow oil to escape from a storage, settling or daily service tank having a capacity of 500 litres and above situated above the double bottom, shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position outside the space concerned in the event of a fire occurring in the space in which such the tanks are situated. (SOLAS 2004 II-2/4.2.2.3.4)
The controls for remote operation of the valve for the emergency generator fuel tank shall be in a separate location from the controls for remote operation of other valves for tanks located in machinery spaces.(SOLAS 2004 II-2/4.2.2.3.4)

11.4.5. Where an emergency generator is not fitted, are engine room emergency batteries in good order and fully charged? (Yes/No/Not Seen/Not Applicable)

Note: The emergency batteries must supply the designed power load for up to 18 hours.

11.4.6. Is all electrical equipment including junction boxes and cable runs in good order? (Yes/No/Not Seen)

11.4.7. Are switchboards free of significant earth faults? (Yes/No/Not Seen/Not Applicable)

Note: Class rules require a minimum insulation resistance of 1 megohm (1 million ohms). Good practice suggests that a much higher standard, as near to infinity as possible should be aimed for.

11.4.8. Are emergency electrical power supplies fully operational? (Yes/No/Not Seen/Not Applicable)

5. Emergency steering

11.5.1. Is the steering gear/steering compartment(s) free from defects? (Yes/No/Not Seen)

11.5.2. Has the emergency steering arrangement been tested within the past three months and are the results recorded? (Yes/No/Not Seen/Not Applicable)

Emergency steering drills shall take place at least once every three months in order to practise emergency steering procedures. These drills shall include testing of direct local control arrangements.

11.5.3. Are emergency steering changeover procedures clearly displayed locally and in the wheelhouse? (Yes/No/Not Seen/Not Applicable)

11.5.4. Are officers familiar with the operation of the steering arrangement in the emergency mode? (Yes/No/Not Seen/Not Applicable)

All ship’s officers concerned with the operation and/or the maintenance of steering gear shall be familiar with the operation of the steering systems and with the procedures for changing from one system to another. (SOLAS V/26.3.2)
Note: The opportunity should be taken if possible to request that an officer demonstrates the operation of the emergency steering arrangement.

11.5.5. Where applicable, is the steering gear emergency reserve tank fully charged? (Yes/No/Not Seen/Not Applicable)

For conventional steering gear: A fixed storage tank shall be provided having sufficient capacity to recharge at least one power actuating system including the reservoir. (SOLAS II-1/29.12.3)
Note: This may not necessarily mean a full tank. A minimum level to comply with these requirements should have been established.

11.5.6. Are the arrangements for the provision of heading information adequate? (Yes/No/Not Seen/Not Applicable)

Ships with emergency steering positions shall at least be provided with a telephone or other means of communication for relaying heading information to such positions. (SOLAS 1974 V/12(f) and SOLAS 2004 V/19.2.1.9)
In addition, ships of 500 gt and upwards constructed after 1st February 1992 shall be provided with arrangements for supplying visual compass readings to the emergency steering position. (SOLAS 74 V/12(f) and SOLAS 2004 V/19.2.5.2)

11.5.7. Are communication arrangements with the bridge satisfactory? (Yes/No/Not Seen/Not Applicable)

Check that the arrangements take into account noise levels within the space.

11.5.8. Is there a means for indicating the rudder angle or thruster direction at the emergency steering position? (Yes/No/Not Seen/Not Applicable)

Thrusters include azimuth thrusters and water jets.

11.5.9. Is access to the emergency steering controls unobstructed? (Yes/No/Not Seen/Not Applicable)

11.5.10. In conventional steering compartments, are suitable handrails, gratings or other non-slip surfaces provided? (Yes/No/Not Seen/Not Applicable)

The steering gear compartment shall be provided with suitable arrangements to ensure working access to steering gear machinery and controls. These arrangements shall include handrails and gratings or other non-slip surfaces to ensure suitable working conditions in the event of hydraulic fluid leakage.

6. Additional comments

11.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

12. General appearance and condition

1. Hull, superstructure and external weather decks

12.1.1. Is the general condition, visual appearance and cleanliness of the hull satisfactory? (Yes/No/Not Seen)

Is the hull free of oil staining, extensive coating breakdown or excessive marine growth?

12.1.2. Are hull markings clearly indicated and correctly placed? (Yes/No/Not Seen)

The ship's identification number shall be permanently marked:
- in a visible place either on the stern of the ship or on either side of the hull, amidships port and starboard, above the deepest assigned load line or either side of the superstructure, port and starboard or on the front of the superstructure; and,
- in an easily accessible place either on one end of the transverse bulkheads of the machinery spaces, or on one of the hatchways or, in the case of tankers, in the pump room. (SOLAS XI-1/3.4)

The permanent marking shall be plainly visible, clear of any other markings on the hull and shall be painted in a contrasting colour. (SOLAS XI-1/3.5.1)
The permanent marking referred to in paragraph 1 shall be not less than 200 mm in height. The permanent marking referred to in paragraph 2 shall be not less than 100 mm in height. The width of the marks shall be proportionate to the height. (SOLAS XI-1/3.5.2)
The requirement for the ship's identification number shall be complied with not later than the first scheduled dry-docking after 1st July 2004 for ships constructed before that date. (SOLAS XI-1/3)
Note: The following should also be clearly indicated, where applicable:
- the vessel/unit's name;
- loadlines;
- draft marks;
- thruster warnings;
- tug push points.

12.1.3. Is the general condition, visual appearance and cleanliness of the external decks satisfactory including non-slip surfaces in working areas and access routes? (Yes/No/Not Seen)

12.1.4. Does the structure include arrangements designed to minimise hazards associated with falls from heights? (Yes/No/Not Seen)

e.g. rails, platforms, back-scratchers

12.1.5. Is the general condition of service pipework satisfactory and is it free from significant corrosion and pitting and soft patches or other temporary repairs? (Yes/No/Not Seen/Not Applicable)

Notes: The following deck pipework, should be examined, particularly on the underside, for external indications of corrosion and for patching or accelerated wear caused by rope abrasion:
- hydraulic and pneumatic pipework;
- fire mains and associated fittings;
- deck steam lines;
- compressed air lines;
- bulk cargo lines.

Pipe securing arrangements should be intact and permit free movement of the pipes as necessary.
Check the condition of pipe stands, clamps, supports and expansion arrangements?

12.1.6. Are all deck openings, including watertight doors and portholes, in a satisfactory condition and capable of being properly secured? (Yes/No/Not Seen)

Are all watertight doors operating correctly, with seals in good condition?

12.1.7. Are there documented procedures for the operation of powered watertight doors which require doors to be left in the normally closed position? (Yes/No/Not Seen/Not Applicable)

All personnel should have received instruction in the operation.
Signs giving operating instructions should be posted on either side of the doorway

12.1.8. Are all watertight doors included in the planned maintenance system? (Yes/No/Not Seen/Not Applicable)

12.1.9. Are all watertight door position indicators operating correctly? (Yes/No/Not Seen/Not Applicable)

Indicators should be available at remote operating and control stations.

12.1.10. Are all cable transits and bulkhead penetrations correctly assembled? (Yes/No/Not Seen)

If the vessel/unit is DP3, cable transits should be double-glanded.

12.1.11. Is a programme in place that covers the periodic inspection of all tanks, void spaces, chain lockers and cofferdams, and their coatings?

(Yes/No/Not Seen)

e.g. bulk cargo tanks, bulk powder silos and tanks for cargo fresh water, drill water, mud, brine, fuel, NLS and methanol.

12.1.12. Are fuel, ballast and other space vents and air pipes in a satisfactory condition, marked to indicate the spaces they serve and does visual evidence indicate regular maintenance? (Yes/No/Not Seen)

Note: Vent heads should be regularly dismantled to prove that flame screens, where fitted are clean and in a satisfactory condition and that the closing device which prevents the ingress of water is also in good condition and operating correctly.

12.1.13. Is the general condition, visual appearance and cleanliness of the superstructure satisfactory? (Yes/No/Not Seen)

2. Electrical equipment

12.2.1. Is deck lighting adequate? (Yes/No/Not Seen)

Note: The level of deck lighting should be adequate to allow for:
- safe access to the various areas;
- the safe use of mooring equipment;
- monitoring of the deck area;
- monitoring of all deck areas and the adjacent surrounding areas to prevent unauthorised access.

12.2.2. Is the general condition of electrical equipment, including light fittings, conduits and wiring, satisfactory? (Yes/No/Not Seen)

3. Internal spaces

12.3.1. Are internal spaces and storerooms clean and tidy? (Yes/No/Not Seen)

12.3.2. Are the forecastle space, rope stores and after stores free of water? (Yes/No/Not Seen/Not Applicable)

4. Accommodation areas

12.4.1. Is the accommodation clean and tidy? (Yes/No/Not Seen/Not Applicable)

Free of animal/insect infestation? Check procedures are in place to manage infestations?

12.4.2. Are alleyways free of obstructions and exits clearly marked? (Yes/No/Not Seen/Not Applicable)

12.4.3. Are public spaces, including smoke rooms, mess rooms, sanitary areas, food storerooms, food handling spaces, refrigerated spaces, galleys and pantries clean, tidy and in a hygienically satisfactory condition? (Yes/No/Not Seen/Not Applicable)

Notes: Unburned fuel or fatty deposits in galley ranges, within flue pipes and in the filters of galley extraction fans can cause fire and must be maintained in a clean condition.
Oil and deep fat fryers should be fitted with thermostats to cut off the electrical power and prevent overheating.

12.4.4. Are laundries and drying rooms free of accumulations of flammable materials that could constitute a fire hazard? (Yes/No/Not Seen/Not Applicable)

Dryers to be free from excessive lint build up.

12.4.5. Is the level of accommodation lighting satisfactory? (Yes/No/Not Seen/Not Applicable)

Check whether a lighting survey has been undertaken and randomly test emergency lights.

12.4.6. Is the condition of electrical equipment in the accommodation satisfactory? (Yes/No/Not Seen/Not Applicable)

No jury rigged electrical appliances or overloaded sockets.

5. Additional comments

12.99. Additional Comments (Text/Not Applicable)

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.