



Oil Companies International Marine Forum

# **OCIMF Report Template**

## **BIQ5 - S.Am C.Am v2.0**

**2206**

**5.0.02**

## General Particulars

## General Particulars

- 1.1** Vessel Variant. [SireText]
- 1.2** Name of Vessel. [SireText]  
*Prefixes (MT, MV, SS etc.) must not be entered unless the prefix is actually a part of the registered name of the vessel. The name must be entered exactly as it appears on the Certificate of Registry or equivalent.*
- 1.3** IMO number. [SireText]  
*If an IMO number has not been assigned, check the box Not assigned*
- 1.4** OCIMF Registered Number or Local Registered Number [SireText]  
*Registered Number should be the same Certificate of Registry's number*
- 1.5** Date of the inspection. [SireDate]
- 1.6** Port of the inspection. [SireText]
- 1.7** Geographic region where the vessel normally trades. [SireLookup]
- 1.8** Flag. [SireLookup]
- 1.9** Deadweight. [SireDecimal]
- 1.10** Gross tonnage. [SireDecimal]
- 1.11** Date the vessel was delivered. [SireDate]  
*Record the original date of delivery from the builder's yard. If exact date is unknown the inspector should set up January 1st of the year built.*
- 1.12** Name of the Company commissioning the inspection. [SireText]  
*The software automatically inserts the name of the Inspecting Company.*
- 1.13** Name of the inspector [SireText]  
*The BIQ software automatically inserts the name of the inspector. This is for use by the Inspecting Company and for OCIMF internal purposes only and will not be displayed in the delivered report.*
- 1.14** Time the inspector boarded the vessel. [SireTime]  
*Unless the inspection was conducted by more than one inspector, do not use the expression (we) in any observation or comment.*
- 1.15** Time the inspector departed the vessel. [SireTime]
- 1.16** Time taken for the inspection [SireDecimal]  
*Record the time taken to conduct the inspection to the nearest 5 minutes. This is the actual time of inspection and does not include the times the inspection was suspended for any reason (Lunch, PSC inspection etc) or was conducted over two or more sessions*
- 1.17** Hull type. [SireLookup]
- 1.18** Vessel's operation at the time of the inspection. [SireLookup]
- 1.19** Products being handled. [SireLookup]
- 1.20** Name of the vessel's Technical Operator. [SireText]
- 1.21** Address of the vessel's Technical Operator. [SireText]
- 1.22** Telephone number. [SireText]
- 1.23** Email address. [SireText]
- 1.24** Date the Technical Operator assumed control of the vessel. [SireDate]
- 1.25** Does the data entered in the Barge and Tug Particulars Questionnaire appear to be accurate and up to date? [SireYesNoNotSeen]  
*To participate in the OCIMF SIRE Programme as a Barge and Tug Particulars Questionnaire (B&TPQ) submitting company, the Operator should contact OCIMF at sire@ocimf.com. Inspectors should randomly check that B&TPQ entries are correct. The B&TPQ should not be used to obtain details of Certificates, expiry dates etc. These must be obtained from the original documents.*
- 1.999** Additional Comments [SireMemo]

# Certification and Documentation

## Certification and Documentation

- 2.1** Has the vessel been provided with valid national or international trading certificates? [SireYesNoNotSeen]  
*Are all the statutory certificates listed below, where applicable, valid and have the annual and intermediate surveys been carried out within the required range dates? Inspector should record certificates issue an expiry date.*
- 2.1.1 Certificate of Registry? - Inspector should record the Owner's name  
 2.1.2 Safety Equipment Certificate, supplemented by Form E  
 2.1.3 Safety Radio Certificate, supplemented by Form R  
 2.1.4 Safety Construction Certificate  
 2.1.5 International / National Tonnage Certificate  
 2.1.6 Loadline Certificate
- 2.2** If applicable, has the technical Operator been provided with a Document of Compliance (DoC)? [SireYesNoNotSeen]  
*Vessels may, or may not be certificated under the ISM Code. The issuing authority for the DoC and the SMC may be different organisations, but the name of the Technical Operator of the vessel must be the same on both. There should be a copy (which need not be a certified copy) of the DoC on board, which shows that the original has been endorsed for the annual verification.*
- 2.3** If applicable, has the vessel been provided with a Safety Management Certificate (SMC)? [SireYesNoNotSeen]  
*The SMC is subject to a renewal verification every five years, and at least one intermediate verification, which, if only one, shall be between the second and third anniversary.*
- 2.4** Has the vessel been provided with an IOPP Certificate, supplemented by Form A or B or National equivalent certificate? [SireYesNoNotSeen]  
**Inspector should record the vessel's type as shown in the Certificate, Form B**  
*An IOPP or NOPP Certificate may or may not, be issued. Issuance may be dependent upon the trading area of the vessel and according to the requirements of the controlling Administration.*
- 2.5** If applicable, Has the vessel been provided with an International Ship Security Certificate? [SireYesNoNotSeen]  
*The ISPS Code came into effect on 1st July 2004. The ISSC is subject to renewal verification every five years, and at least one intermediate verification, which, if only one, shall be between the second and third anniversary. Actual requirements will vary from country to country.*
- 2.6** Has the vessel been provided with a Certificate of Fitness for the Carriage of Chemicals or Noxious Liquid Substances Certificate? [SireYesNoNotSeen]  
*This will be issued either under the IBC or BCH Code for chemicals. A NL Certificate is required for any vessel carrying MARPOL Annex 2 cargoes that does not have a Certificate of Fitness for the Carriage of Chemicals. Noxious liquid substance means any substance indicated in the Pollution Category column of chapter 17 or 18 of the International Bulk Chemical Code or provisionally assessed under the provisions of regulation 6.3 as falling into category X, Y or Z.*
- 2.7** Has the vessel been provided with a Certificate of Fitness for the Carriage of Gas? [SireYesNoNotSeen]  
*This will be issued either under the IGC, GC or EGC Code for gas. Gas carriers carrying dual code cargoes must have a NLS Certificate.*
- 2.8** Has the vessel been provided with a Civil Liability Convention (1992) Certificate? [SireYesNoNotSeen]  
*The name of the owner should be the same as that on the Certificate of Registry.*
- 2.9** What is the Name of vessel's P and I Club or equivalent entity? [SireText]  
*Indemnity may be provided by a P&I club or an equivalent entity.*
- 2.10** Is the vessel registered with a Classification Society? [SireYesNoNotSeen]
- 2.11** Which Classification society is the vessel registered with? [SireLookup]
- 2.12** What is the date of expiry of Class Certificate? [SireDate]  
*This will usually be the same date as that when the next Special Survey is due.*
- 2.13** What was the date of the last Intermediate Survey? [SireDate]
- 2.14** What was the date of the last Annual Survey? [SireDate]
- 2.15** What was the date of the last Special Survey? [SireDate]

- 2.16** Is the Class Quarterly Summary report available, less than 3 months and free of COC? [SireYesNoNotSeen]  
*Report shouldn't be older than 3 months, otherwise the question should be answered NO.*
- 2.17** Is the General Arrangement Plan available and legible? [SireYesNoNotSeen]
- 2.18** Is a Damage Stability Plan on board? [SireYesNoNotSeen]  
*Every oil tanker delivered after 31 December 1979, as defined in regulation 1.28.2, of 150 gross tonnage and above, shall comply with the subdivision and damage stability criteria as specified in paragraph 3 of this regulation, after the assumed side or bottom damage as specified in paragraph 2 of this regulation, for any operating draft reflecting actual partial or full load conditions consistent with trim and strength of the ship as well as relative densities of the cargo. (MARPOL Annex I reg 28(1))*  
*Every oil tanker of 5,000 tonnes deadweight or more shall have prompt access to computerised shorebased damage stability and residual structural strength calculation programs. (MARPOL Annex I reg 37.4)*  
*Note: The vessel should have an approved stability information book (SIB), written in a language understood by the officers on board, and the SIB should cover damage conditions that include:*  
*- any required and intended loading conditions (including the ones corresponding to multiple freeboards when so assigned to the vessel), i.e. symmetrical/unsymmetrical, homogeneous/alternating or ballast/partial/full;*  
*- types (e.g. oil) of liquid cargo allowed including range of densities The vessel may have class approved onboard stability computer programme that includes damage conditions for all loading conditions presented in the SIB except for ballast, light ship and docking conditions . The methods of verifying the damage stability conditions may include pre-programmed damage cases for each loading condition, including capability for calculation of intermediate damage stages with variation of draft due to varying cargo density;*  
*- tank loading patterns*  
*- extents of tank filling to ensure that for any possible (alternate) loading condition the most onerous damages have been examined according to relevant stability criteria and these may be recorded in comments.*  
*A sailing condition is deemed to be approved if the filling of each cargo and ballast tank lies within 1% of the weight in the approved condition and GMF lies within 2 cm of the approved condition GMF. Record an observation if the vessel has ever been loaded to a condition not in accordance with the SIB. However, if the vessel was loaded to a condition according to any of the damage conditions as per the class approved on board stability computer programme and not in accordance with SIB; additional comments need to be inserted with details*
- 2.19** What is the interval between scheduled drydockings? (in months) [SireDecimal]
- 2.20** What was the date of departure from the last scheduled drydock? [SireDate]  
*In-water repair periods do not qualify as dry-docking. If the vessel's last drydock was unscheduled (e.g. as a result of an accident) record the details.*
- 2.21** If the vessel had a last port/flag State control inspection, is it report free of non-conformities? [SireYesNoNotSeen]  
*If No, enlist the nature of the non-conformities, and place and date of FLAG/PSC inspection.*
- 2.22** Has the Operator provided operating policies and procedures, and are these being followed? [SireYesNoNotSeen]  
*This should include the Operator's Health, Safety and Environment (HSE) policy.*
- 2.999** Additional Comments [SireMemo]

## Crew Management

### Crew Management

- 3.1** Is the Master or nominated Master and crew provided with valid licenses or equivalent? [SireYesNoNotSeen]
- 3.2** If the vessel has been provided with a Minimum Manning Document (MMD) does the actual manning meet or exceed the MMD requirements? [SireYesNoNotSeen]  
*Personnel responsible for cargo carriage or transfer must be suitably qualified to handle the cargoes on board.*
- 3.3** If the vessel is unmanned, are the personnel in charge of the cargo transfer suitable trained and certified? [SireYesNoNotSeen]  
**Inspector should comment on the manning arrangement regarding quantity of qualified crewmembers attending a cargo transfer operation.**
- 3.4** If the vessel is manned, complete the attached crew matrix for all officers and ratings [SireYesNoNotSeen]
- 3.5** If the vessel is manned, are personnel directly employed by vessel's Operator? [SireYesNoNotSeen]
- 3.6** Are policies relating to work and rest periods in place and are they being complied with? [SireYesNoNotSeen]  
*Such policies are applicable to all personnel involved with operations. Records for hours of rest must be maintained for both manned and unmanned vessels. These, and physical evidence must show that hours of rest are at least in accordance with those applicable in STCW:*
- a) 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 of rest in any 24-period*
- b) The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length*
- c) Minimum period of ten hours may be reduced to not less than 6 consecutive hours provided that any such reduction shall not extend beyond two days and not less than 70 hours of rest are provided each seven-day period.*
- 3.7** Does the Operator or the contractor supplying personnel, have a Drug and Alcohol policy that meets or exceeds OCIMF guidelines? [SireYesNoNotSeen]  
*OCIMF recommends that officers and ratings observe a period of abstinence from alcohol prior to scheduled watchkeeping duty or work periods. The objective should always be to ensure that, prior to going on scheduled duty, the blood alcohol content of the seafarer is theoretically zero. (OCIMF Guidelines for the control of drugs and alcohol). The D&A policy must be posted in a prominent position, state the maximum permitted level of blood alcohol, the frequency of D&A testing and, if an external testing agency is used, the name of the agency.*
- 3.8** What is the frequency of unannounced drug testing? [SireDecimal]  
**Inspector should record the latest drug tests dates**  
*Record the interval between scheduled random drug testing in Months*
- 3.9** What is the frequency of unannounced alcohol testing? [SireDecimal]  
**Inspector should record the latest alcohol tests dates**  
*Record the interval between scheduled random alcohol testing in Months*
- 3.10** At what frequency do personnel undergo medical examinations? [SireDecimal]  
*The frequency of medical check-ups will be determined in accordance with the cargoes carried and the degree of exposure to which personnel are subjected.*
- 3.999** Additional Comments [SireMemo]

## Navigation and Communication

### Navigation and Communication

- 4.1** Is an up to date Operator's Navigational and Bridge Organization Manual on board that lists the duties of the watchkeeping responsible persons? [SireYesNoNotSeen]  
*Manuals and procedures should be in place and clearly understood . Procedures should address high risk navigational situations. e.g. restricted visibility, high traffic density, reduced manoeuvrability etc.*
- 4.2** According to the trading area and operation purpose, is the navigational equipment appropriate and operating satisfactorily? [SireYesNoNotSeen]  
*Regardless as to whether a vessel is required by legislation to carry specific navigational equipment, if navigational equipment is fitted then it should be operational. Such equipment may be a course recorder, off-course alarm, and electronic chart display, engine order logger/printer or other equipment. The inspector should make spot checks to ensure that equipment, as fitted and as appropriate to the vessel, is operational. If equipment is either missing or not operational, record this as an observation.*
- 4.3** Is an operational magnetic compass with light provided? [SireYesNoNotSeen]
- 4.4** If fitted is an operational gyro compass with repeaters provided? [SireYesNoNotSeen]
- 4.5** If fitted is an operational GMDSS provided? [SireYesNoNotSeen]  
*If the vessel is provided with GMDSS, personnel must be qualified in its use.*
- 4.6** Is an operational Global Position System receiver (GPS) provided? [SireYesNoNotSeen]  
*The GPS position system input should be set to WGS 84 datum.*
- 4.7** Is an operational main engine/shaft RPM indicator provided? [SireYesNoNotSeen]
- 4.8** If vessel is fitted with controlled pitch propeller, is a pitch indicator provided? [SireYesNoNotSeen]
- 4.9** Is an operational radar provided? [SireYesNoNotSeen]
- 4.10** Is an operational VHF Radio provided? [SireYesNoNotSeen]
- 4.11** Are operational hand-held radios (walkie talkies) provided? [SireYesNoNotSeen]  
*Portable VHF/UHF radios should be type-approved for use in gas-hazardous areas.*
- 4.12** Is an operational search light provided? [SireYesNoNotSeen]  
*All tugs and inland trading vessels should have at least two searchlights with illumination capability twice the length of the vessel or barge/tug unit.*
- 4.13** Are operational sound signals provided? [SireYesNoNotSeen]
- 4.14** Is an operational depth sounder provided? [SireYesNoNotSeen]  
*Inspector should check condition of electric cables and equipment if portable transducers are being used in dumb barges.*
- 4.15** If fitted, is a speed and distance indicator working properly? [SireYesNoNotSeen]
- 4.16** Is a rudder angle indicator provided? [SireYesNoNotSeen]
- 4.17** Is a rate of turn indicator provided? [SireYesNoNotSeen]
- 4.18** Are operational navigation lights and signals provided? [SireYesNoNotSeen]  
*Emergency lighting system should also be tested by the inspector.*
- 4.19** If portable navigation lights are used, are they suitable for being set in hazardous areas? [SireYesNoNotSeen]  
*Inspector should check if lights are in good working condition and indicate in the report how the lights are being powered? (solar, batteries, etc). In the case of barges forming a convoy being pushed they should be fitted with side navigation lights, and forward mast light if LOA > 50 meters.*
- 4.20** If fitted, is a Digital Selective Calling (DSC) Communications working properly? [SireYesNoNotSeen]  
*A qualified person should be designated to handle distress communications.*

- 4.21** If fitted, is an Automatic Identification System (AIS) working properly? [SireYesNoNotSeen]
- AIS is required to be operating while a ship is underway and while at anchor. Some port authorities may request that the AIS is kept on when a ship is alongside. The AIS operates on a VHF frequency and transmits and receives information automatically, and the output power ranges between 2 watts and 12.5 watts. Automatic polling by another station (e.g. by port authority equipment or another ship) could cause equipment to transmit at the higher (12.5 watt) level, even when it is set to low power (2 watts). When alongside a terminal or port area where hydrocarbon gases may be present, the AIS should either be switched off or the aerial isolated and the AIS given a dummy load. Isolating the aerial preserves manually input data that may be lost if the AIS was switched off. If necessary, the port authority should be informed.*
- When alongside terminal or port areas where no hydrocarbon gases are likely to be present, and if the unit has the facility, the AIS should be switched to low power. If the AIS is switched off or isolated whilst alongside, it must be reactivated upon leaving the berth. The use of AIS equipment may affect the security of the ship or the terminal at which it is berthed. In such circumstances, the use of AIS may be determined by the port authority, depending on the security level within the port. (ISGOTT 4.8.4)*
- Where either or both ships involved in STS operations are required to have an AIS operating while under way or at anchor, the AIS equipment should remain in use at all times including during STS operations. The AIS equipment used for the AIS broadcasts need not be set to low power output during STS operations. (STS Transfer Guide petroleum 3.5.5.4)*
- Notes: If the AIS is not interfaced with either a radar or electronic chart display, it should be positioned adjacent to one of them. Certain manufacturers have modified their AIS equipment to provide a 'Tanker Mode' that permits selection of a 1W output.*
- 4.22** If fitted, is a NAVTEX system working properly? [SireYesNoNotSeen]
- 4.23** Are appropriate optical signals/daylight shapes provided? [SireYesNoNotSeen]
- 4.24** Is an operational internal communication system provided? [SireYesNoNotSeen]
- 4.25** Is an operational general alarm provided? [SireYesNoNotSeen]
- 4.26** Are operational binoculars provided? [SireYesNoNotSeen]
- 4.27** Are local regulations relating to navigation and collision avoidance provided, and are these adequate for the vessel's trading area? [SireYesNoNotSeen]
- 4.28** Are the navigation charts, light lists, tide tables and pilot books provided, adequate for the vessel's trading area? [SireYesNoNotSeen]
- Fully corrected and up to date charts should be provided for at least the most recent previous voyage and the forthcoming voyage. If navigational aids additional to those addressed in this questionnaire have been provided, list these in the Additional Comments.*
- 4.29** Are emergency steering gear changeover instructions posted and are they clearly understood? [SireYesNoNotSeen]
- 4.30** If a bow or stern thruster is fitted, are operating instructions provided and are the directions of thrust clearly indicated on the operating console? [SireYesNoNotSeen]
- 4.31** Are the air draughts clearly displayed in the wheelhouse? [SireYesNoNotSeen]
- The vertical distance from the water line to the top of the highest structure on the vessel or combined units must be displayed.*
- 4.32** Are local navigation warnings received on board on a regular basis, and readily available to the navigators? [SireYesNoNotSeen]
- 4.33** Is a comprehensive passage plan available for the previous voyage and did it cover the full voyage from berth to berth? [SireYesNoNotSeen]
- These should include guidance on minimum under-keel clearance. All inland navigation barges should develop at least a buoy/marks list. Squat calculation should be considered in sea going barges. Question does not apply for voyages within the port limits.*
- 4.34** If vessel is trading in open waters are compass errors taken each watch? [SireYesNoNotSeen]
- Satisfactory evidence of compliance can include use of leading lights or lines (ranges). Multiple deviation cards may be required for tugs because deviation can change substantially when pushing barges in the loaded and light condition.*
- 4.35** Are the intervals between position fixes appropriate to the vessel's location? [SireYesNoNotSeen]
- Position monitoring in narrow channels should be continuous.*
- 4.999** Additional Comments [SireMemo]



# Safety Management

## Safety Management

**5.1** Is the deck area free of visible safety deficiencies? [SireYesNoNotSeen]

*Fuel, ballast and other space vents and air pipes should be in good order it should be evidence that indicate regular maintenance. Deck lighting should be adequate to allow sufficient visibility to permit safe access to all areas of the deck, the safe use of mooring equipment; the monitoring of the deck area for spills and leakages; The monitoring of all deck areas and the adjacent surrounding areas to prevent unauthorised access.*

**5.2** Does the Operator provide adequate personal protection equipment, (PPE) appropriate to the cargo(es) being carried; are instructions for its use provided, and is it being used correctly? [SireYesNoNotSeen]

*Personnel should be properly trained in the use of PPE.*

**5.3** Is a Safety Management Manual available on board and are personnel familiar with its contents? [SireYesNoNotSeen]

**5.4** Is propane gas is used for cooking and/or heating? [SireYesNoNotSeen]

**5.5** Are places where smoking is permitted adequately identified, are smoking regulations being observed, and are doors and other means of access kept closed? [SireYesNoNotSeen]

*If smoking is permitted safety matches should be provided by the operator. Warning notices should be posted on the doors to these designated compartments.*

**5.6** Is the vessel provided with a safe means of access? [SireYesNoNotSeen]

*Safe access to small craft is often difficult. Inspectors should use good judgement to determine that access to or between vessels, tugs and jetties access is safe. Vessels should have a lifebuoy, light and rescue line at, or near the point of access. Alternatively, personnel should be provided with, and should wear a personal flotation device with water-actuated light. All access and working areas should have adequate lighting.*

**5.7** Is loose gear on deck or in internal spaces properly secured? [SireYesNoNotSeen]

**5.8** Is an operational emergency lighting system provided? [SireYesNoNotSeen]

## Fire Fighting Equipment.

- 5.10** Is the fire pump and fire main pipeline in satisfactory condition and operational? [SireYesNoNotSeen]  
*Test should be conducted starting a fire pump, using at least the two required jets of water to show that the system is working properly. Fire main pipeline should be periodically pressure tested.*
- 5.11** Is an Emergency Plan posted? [SireYesNoNotSeen]  
*This may be provided as a single plan and incorporated in the Muster List (Station Bill) and include fire and lifesaving contingencies or in the form of separate plans.*
- 5.12** Is sufficient fire fighting equipment on board, including hoses, nozzles, firemen's outfits, breathing apparatus and portable extinguishers and is it in satisfactory condition, and ready for immediate use and crew is familiar with its operation ? [SireYesNoNotSeen]  
*Sufficient equipment must be provided to respond to fire emergencies. The equipment should be in satisfactory condition and records should indicate proper maintenance. Drills should be carried out at regular frequent intervals and documented. Fully charged, spare breathing apparatus air cylinders should be provided. This equipment may be carried permanently on board, or provided when cargo is being transferred, oxygen resuscitator, if vessel is not fitted with fire main inspector should record the fact as a deficiency.*
- 5.13** If fitted, are fixed fire, smoke and gas detection systems and emergency systems fully operational, tested, and are the inspection records up to date? [SireYesNoNotSeen]
- 5.14** If a fixed fire fighting system is installed, is it in satisfactory condition? [SireYesNoNotSeen]  
**Inspector should describe type of fixed fire fighting system fitted.**  
*If a fixed fire fighting system is installed, records of the last analysis of foam and/or dry powder should be provided. If a fixed CO2 fire fighting system is installed, engine room ventilation should be fitted with fire dampers, record of the date of its last testing should be on board. Alcohol resistant foam must be provided for chemical carriers.*
- 5.15** If fitted, is the type of foam compound suitable for the cargoes which the vessel is certified to carry? [SireYesNoNotSeen]  
*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).*
- 5.16** Do records and personnel demonstrate effective firefighting and safety training and competence? [SireYesNoNotSeen]  
*Details of training should be available for both permanently employed personnel and those contracted to operate unmanned barges.*
- 5.17** if the vessel is provided with a deck water spray system, is it in satisfactory condition? [SireYesNoNotSeen]  
*If the vessel is provided with a deck water spray system, specify whether the system uses fresh water or sea water and record where the water is supplied from.*
- 5.18** If fitted, 'Is the emergency fire pump in satisfactory condition and operational? [SireYesNoNotSeen]  
*Emergency fire pump should be periodically tested weekly and records kept.*
- 5.19** if fitted, is the emergency stop for the accommodation ventilation system clearly marked recently tested and properly recorded? [SireYesNoNotSeen]

## Lifesaving Equipment.

- 5.20** Is all required lifesaving equipment on board; is it in satisfactory condition and ready for immediate use and are personnel familiar with its operation? [SireYesNoNotSeen]

*A procedure should provide familiarisation of new personnel with use of lifesaving equipment. Emergency drills should be undertaken at regular and frequent intervals. The required number and type of distress signals on board should be in date, properly stowed and ready for immediate use. Station Bills/Muster lists should be posted and up to date. The capacity of the life raft(s) must be sufficient for the vessel's complement; in satisfactory condition and hydrostatic releases must be correctly attached and ready for immediate use. Lifejackets should be provided for all personnel, in satisfactory condition and fitted, as required with self-igniting light, or line. Lifejacket donning notices should be posted. The emergency equipment locker should be clearly marked and easily accessible.*

- 5.21** If applicable are survival suits provided for all personnel? [SireYesNoNotSeen]

- 5.22** Are safety ropes and equipment available to effectively undertake rescue from enclosed spaces? [SireYesNoNotSeen]

- 5.23** Are emergency escape sets (EEBD) provided for every person on board where required? [SireYesNoNotSeen]

*Emergency escape sets of 15 minutes duration should be fitted in machinery spaces and other manned enclosed spaces. If the vessel is carrying toxic cargoes, emergency escape packs must be provided for all personnel.*

## Operational Safety.

- 5.24** Are Safety Data Sheets (SDS) provided specifically for the cargoes being carried and are they posted? [SireYesNoNotSeen]

*Safety Data Sheets should be provided for all cargoes carried. These should be posted in a prominent position. Personnel should be trained and familiar with the required responses to deal with emergencies involving the cargoes being carried.*

- 5.25** Are all personnel aware of the emergency procedures for dealing with leakage, spillage or fire involving the cargo? [SireYesNoNotSeen]

- 5.26** Is the vessel provided with appropriate safety and protective equipment required by the IBC ? [SireYesNoNotSeen]

- 5.27** If appropriate to the cargoes carried, are gas-tight proximity suits or chemical resistance suits available and in satisfactory condition? [SireYesNoNotSeen]

- 5.28** Is continuous communication between the barge and tug, or the barge and dock, being maintained? [SireYesNoNotSeen]

- 5.29** Are dangerous cargo signals (red flag or red light) displayed? [SireYesNoNotSeen]

*Dangerous cargo signal should be displayed when loading/unloading or carrying hydrocarbons*

- 5.30** Are satisfactory safety procedures provided for the following operations? [SireYesNoNotSeen]

*5.30.1 - cargo transfer?*

*5.30.2 - entering cargo tanks / pumproom?*

*5.30.3 - hot work?*

*5.30.4 - to respond to a breakout from the berth during cargo operations?*

*5.30.5 - to respond to a burst cargo hose or cargo pipeline fracture?*

*5.30.6 - to respond to a cargo tank overflow?*

*5.30.7 - to respond to cargo leakage into an adjoining space?*

*5.30.8 - to respond to a failure of the steering gear?*

*5.30.9 - to respond to collision or grounding that results in pollution?*

*5.30.10 - to respond to incidents involving nitrogen, when applicable?*

*5.30.11 - to ensure that oxygen levels are safely controlled during nitrogen purging, when applicable?*

*5.30.12 - to ensure that self-reacting products are handled safely, when applicable?*

*5.30.13 - Are safe and effective procedures in place for gas freeing?*

- 5.31** Are procedures in place to keep the accommodation space free of gas? [SireYesNoNotSeen]

*Accommodation doors, openings, ports and ventilators should be closed during cargo and ballast transfer operations. The accommodation atmosphere must be maintained at a positive pressure at all times to prevent the ingress of flammable vapours.*

- 5.32** Are procedures in place to respond to the development of dangerous concentrations of gas? [SireYesNoNotSeen]  
*Personnel should be aware of the dangers associated with the generation of gas, particularly in cases where hydrocarbon vapours may accumulate around the deck and accommodation spaces in calm weather conditions. Manned vessels fitted with air conditioning systems should maintain these on partial re-circulation during cargo operations to ensure that the accommodation spaces are maintained at positive pressure at all times. In the event that hydrocarbon gas may enter the accommodation the only course of action may be to shut down the air conditioning unit(s).*
- 5.42** If a pump room is installed, does it meet controlling international, national and local regulations? [SireYesNoNotSeen]  
*The pumproom should be equipped to meet SOLAS equivalent requirements for lighting, ventilation, high level bilge alarm, gas monitoring. The pumps should be fitted with temperature sensors. If the vessel is not equipped with any of the foregoing, the question must be answered No.*
- 5.45** Are means provided for the testing of void spaces for explosive and/or toxic gases? [SireYesNoNotSeen]  
*During loaded voyages, records of testing should be maintained.*
- 5.46** Do personnel demonstrate familiarity with the operation and calibration of portable gas detection instruments? [SireYesNoNotSeen]  
*Portable instruments appropriate to the cargoes being handled should be carried and should be in satisfactory working condition.*
- 5.47** Are emergency eye bath, sprays and decontamination showers available and in satisfactory condition? [SireYesNoNotSeen]  
*When the vessel operates in areas of low ambient temperatures, means to protect against freezing must be provided.*
- 5.49** Are emergency first aid kits available? [SireYesNoNotSeen]
- 5.52** If the vessel is certified to carry benzene, are warning signs posted and is the restricted zone marked? [SireYesNoNotSeen]  
**Marpol/Annex 1/Appendix 1 lists the following hydrocarbons: 1) Crude Oil, Fuel Oil, Diesel Oil, Gas Oil, JP, Naphtha.**  
*Measures should be taken for all ships carrying bulk liquids containing benzene the content of which is 0.5% or more by mass. The cargoes that may contain benzene are, for example, the cargoes listed in Appendix I to Annex I to Marpol 73/78, and the following bulk liquids: 1) benzene and benzene mixtures. 2)naphtha, varnish makers and paints (75%), and 3) white spirit. (IMO MSC circ. 1095).*

### Tank Cleaning Safety.

- 5.53** Are the crew aware of the dangers associated with tank cleaning? [SireYesNoNotSeen]  
*Tank cleaning is one of the most hazardous operations in tankers and tank barges. Every precaution must be taken to guard against the dangers associated with static electricity during tank cleaning and use of re-recycled wash water . The toxic hazards when tank cleaning after the carriage of chemicals must be understood. It is essential that a comprehensive tank cleaning guide is available on board*
- 5.55** Are cargo tank atmospheres controlled during tank cleaning? [SireYesNoNotSeen]  
*Safe and effective procedures should be in place when tank cleaning using chemicals and solvents and when gas freeing and steaming cargo tanks.*
- 5.56** Are deck atmospheres regularly monitored for gas accumulations during cargo transfer and tank cleaning operations? [SireYesNoNotSeen]
- 5.59** If fitted, are outside air conditioning units type-approved for use in gas-hazardous areas? [SireYesNoNotSeen]  
*If equipment is not approved for use in gas hazardous area it should be switched off during cargo operations*

### Vessel Security.

- 5.60** If applicable, Has the vessel been issued with an approved Ship Security Plan? [SireYesNoNotSeen]  
*Security levels should be established and personnel should be familiar with them.*
- 5.61** Are measures in place to prevent unauthorised boarding? [SireYesNoNotSeen]  
*This includes provision of a deck watch, gangway notices and effective control of visitors.*
- 5.999** Additional Comments [SireMemo]

## Pollution Prevention

### Pollution Prevention

- 6.1** Is the vessel provided with Oil Record Books? [SireYesNoNotSeen]  
*Regardless as to whether MARPOL Oil Record Books (ORBs) are required by local regulations, equivalent records must be maintained to account for the same operations as contained in the ORB's. Entries in the Oil Record Books, (or their equivalent) must be up to date, accurate and Parts I and II must agree.*
- 6.2** Is an approved MARPOL Shipboard Oil Pollution Emergency Plan (SOPEP) or Shipboard Marine Pollution Emergency Plan (SMPEP) provided? [SireYesNoNotSeen]  
**Inspector should record the last drill in the report.**  
*These must include oil spill/emergency notification procedures.*
- 6.3** Is the IMO Coastal Contact list or local equivalent provided? [SireYesNoNotSeen]  
*The IMO Contact list, contained in the Vessel Response Plan, (or its local equivalent) should be up to date. The master should be aware of port contact procedures and a Contact List should be drawn up for the current port.*
- 6.5** Are anti-pollution notices posted? [SireYesNoNotSeen]
- 6.6** Are bulkheads, pipelines and the hull, free of visible leaks? [SireYesNoNotSeen]  
*Void spaces should be free of product and water. Covers should be tight and fitted with good quality gaskets.*
- 6.7** If fitted, are hydraulic lines on deck free of visible leaks? [SireYesNoNotSeen]
- 6.8** Is a perimeter spill rail fitted; are scuppers in place and are they liquid tight? [SireYesNoNotSeen]  
*A raised steel plate along the cargo deck to a minimum height of 100mm (4 inches) should be fitted. In addition, a similar plate should be fitted transversely across the aft deck main deck to prevent spillage of product running aft to the accommodation area. If cargo pumps are fitted on deck, these should be fitted with spill containment.*
- 6.9** Are all the cargo manifolds provided with fixed spill trays? [SireYesNoNotSeen]  
*All connections, including those to vapour return system should be above the spill containment area.*
- 6.10** Are all hose connections and manifold blank flanges fully bolted? [SireYesNoNotSeen]
- 6.11** If bunker and diesel tank vents are fitted are they provided with spill savealls? [SireYesNoNotSeen]  
*Savealls should be marked to show the capacity of the saveall and identify spaces that are served by the vents.*
- 6.12** Are decks free of oily material? [SireYesNoNotSeen]
- 6.13** if the vessel is provided with containment booms, are they in satisfactory condition? [SireYesNoNotSeen]
- 6.14** If fitted, are tank side overboard discharge valves lashed or sealed in the fully closed position and properly marked? [SireYesNoNotSeen]
- 6.16** Are bilge water and cargo slops handled in accordance with MARPOL or in accordance with the requirements of the local authorities? [SireYesNoNotSeen]  
*Receipts should be retained, accounting for the disposal of cargo slops and engine residues to either barge or shore reception facilities.*
- 6.17** Is the engine space free of unauthorised overboard discharges and any evidence that unlawful oil discharge has taken place? [SireYesNoNotSeen]
- 6.18** Are receipts maintained for each disposal of garbage? [SireYesNoNotSeen]  
*Certificates may not always be provided where vessels are trading inland. However records should indicate the dates when disposals occurred, and of the quantity and nature of the garbage disposed.*
- 6.19** Are sampling connections, valves, caps or plugs properly secured to pipeline drains and vents and in satisfactory conditions? [SireYesNoNotSeen]
- 6.999** Additional Comments [SireMemo]

## Structure

### Structure

- 7.1** Is the vessel enrolled in a structural survey programme and are records available? [SireYesNoNotSeen]

*Operator should have a programme whereby the hulls of all vessels are regularly inspected for deformities, corrosion and wastage (internal and external) by a suitable qualified person. All classed vessels should be free of any outstanding Condition of Class that affect the oil tight or watertight integrity of the hull. Vessels should be subject to a regular dry docking inspection at intervals not exceeding five years.*

- 7.2** Are structural survey records available, do they record that the hull thickness measurements are within acceptable limits? [SireYesNoNotSeen]

*Classification Society or controlling Authority Annual, intermediate and periodical survey reports relating to structural condition should be available and these should be reviewed. Items for survey should include, all cargo tanks, ballast tanks, pump-rooms, cofferdams and void spaces bounding cargo tanks. Decks and outer hull should be examined, and this examination should be supplemented by thickness measurement and testing as deemed necessary. The examination should be sufficient to discover substantial corrosion, significant deformation, fractures, damage and other structural deterioration.*

- 7.3** Are records available to indicate regular inspection of cargo/ballast/void spaces tanks and if applicable testing of tank coatings and/or stainless steel tanks? [SireYesNoNotSeen]

**Inspector should record frequency of inspections and last inspection date**

*Vessel's crew are not normally expected to enter cargo or ballast tank. If tanks must be entered, the relevant procedures and precautions described in ISGOTT for entering enclosed spaces should be strictly followed. Tanks and void spaces being used for water ballast should preferably be coated, but as a minimum should be fitted with sacrificial anodes.*

- 7.4** If any cargo and/or ballast tanks were sighted from the deck, were they in good order? [SireYesNoNotSeen]

*If the internals of a tank, or tanks, were sighted from the deck, record this fact either as an Observation or Other comments as applicable and list the findings as appropriate.*

*Notes: Regardless of whether tank entry is made, the opportunity should be taken where possible to sight from the deck the internal condition of at least two compartments and the forepeak. Valuable indications as to the condition of compartments such as ballast tanks, access trunks and peak tanks can be made from a visual inspection from the outside.*

*Indications of problems can be wastage of handrails and ladder rungs, visible corrosion on vertical and horizontal framing, knife-edges on brackets, visible cracking and deformations of bulkheads or frames.*

*Leakage from adjacent tanks or valve glands may be indicated by the presence of oil or a sheen on the ballast, the presence of gas or the sound of falling liquid.*

- 7.5** Is the vessel operating free of a drydock or external or internal structural survey extension? [SireYesNoNotSeen]

*Record if the vessel operating on a drydock or external or internal structural survey extension?*

- 7.999** Additional Comments [SireMemo]

## Cargo Handling

### Cargo Handling

- 8.1** Is the vessel provided with a cargo manual with instructions and procedures with regard to safe cargo operations? [SireYesNoNotSeen]
- 8.2** Has a Ship/Shore Safety Check List (SSSCL) been properly completed and have those items that require reinspection, been inspected at the appropriate intervals? [SireYesNoNotSeen]  
*The SSSCL should contain at least those questions as provided in ISGOTT. Copies of the SSSCL should be retained on board for a period of at least 30 days.*
- 8.3** Have written loading, discharge or ballast transfer plans, as appropriate, been prepared for the current operations? [SireYesNoNotSeen]  
*Cargo transfer procedures must include precautions against exceeding permissible hull stresses. Personnel must be aware of trim and list limitations. A system should be in place to undertake visual checks for hull leaks and presence of oil in spill trays and other spaces prior to departure.*
- 8.4** If the cargo is required to be inhibited, is the required information available? [SireYesNoNotSeen]
- 8.5** Are legible and up to date pipeline and/or mimic diagrams of the cargo system, inert gas system and venting system available in the cargo control position? [SireYesNoNotSeen]
- 8.6** Is information readily available to the responsible persons relating to maximum loading rates and venting capacities? [SireYesNoNotSeen]  
*Personnel should be aware of all limitations associated with cargo loading.*
- 8.7** Is the Cargo Record Book correctly completed and up to date? [SireYesNoNotSeen]
- 8.8** Are the cargoes being carried listed on the Certificate of Fitness? [SireYesNoNotSeen]  
*If the cargoes being carried are not listed on the Certificate of Fitness, cargoes should be loaded with the approval of a competent authority.*
- 8.9** Is there a Procedures and Arrangements Manual available? [SireYesNoNotSeen]
- 8.10** Are the responsible persons familiar with the carriage requirements for the cargoes on board and chemicals in general? [SireYesNoNotSeen]
- 8.12** Are the dangers associated with co-mingling non-compatible cargoes in slop tanks and drip trays considered? [SireYesNoNotSeen]
- 8.13** Are safe and effective procedures in place for the effective stripping (final draining) of tanks at the end of cargo discharge? [SireYesNoNotSeen]
- 8.14** Are safe and effective procedures in place for changing cargo grades? [SireYesNoNotSeen]
- 8.15** Are safe and effective procedures in place for ballasting and de-ballasting? [SireYesNoNotSeen]
- 8.16** Are safe and effective procedures in place for Ship to Ship (STS) cargo transfer operations? [SireYesNoNotSeen]
- 8.19** As applicable, are cargo pumps, booster pumps, ballast pumps and stripping pumps, eductors and their associated instrumentation and controls in satisfactory operational condition, free of leaks and is there evidence of regular testing? [SireYesNoNotSeen]
- 8.20** If fitted, Have satisfactory column/cofferdam purging routines been established on deep well pumps ? [SireYesNoNotSeen]
- 8.21** Are tank domes and associated fittings in a satisfactory condition and free from leaks and corrosion? [SireYesNoNotSeen]
- 8.22** Is the barge fitted with cargo pumps? [SireYesNoNotSeen]  
*Emergency Stop System should be fully operational, regularly tested and recorded before any discharge operation system should be activated from at least 2 different locations.*
- 8.23** Are powered valves set to close within 20-30 seconds? [SireYesNoNotSeen]
- 8.24** Is an emergency discharge method available? [SireYesNoNotSeen]  
*If yes . The inspector should describe the details of the emergency discharge method.*

- 8.25** Are static electricity precautions being observed? [SireYesNoNotSeen]  
*Adherence to the latest ISGOTT / ISGINTT or industry guidance addressing Static Electricity should be made.*
- 8.26** If the vessel is equipped with derricks or hose handling booms, are they in satisfactory condition, marked with Safe Working Load and are they regularly tested? [SireYesNoNotSeen]  
*Cargo lifting equipment should be load tested every five years and thoroughly examined by a competent person annually. Other lifting equipment is not regulated except as usually required by class, but should be tested and examined under a similar regime. The minimum SWL for which testing is required is one tonne (1000kgs). A Chain register is not required, but there must be documentation supporting test and examination. Valid certificates and records of maintenance should be on board.*
- 8.27** Are the cargo/ballast pumproom ventilation fans shut-down arrangements operational? [SireYesNoNotSeen]  
*If flooding dumpers are fitted they should be properly operated*
- 8.28** If multiple cargoes are being handled, are signs placed at each cargo manifold, identifying the grade of cargo? [SireYesNoNotSeen]
- 8.29** Are cargo pipelines in satisfactory conditions free of soft patches or other temporary repairs? [SireYesNoNotSeen]
- 8.30** Are cargo pipelines tested annually to 1.0 times their maximum allowable working pressure, twice within any five-year period to 1.5 times their rated allowable working pressure, and are the results recorded? [SireYesNoNotSeen]  
*Cargo pipelines should be tested to 100% of their rated working pressure (Sometimes referred to as Maximum Allowable Working Pressure - MAWP) at least annually. Cargo pipelines should be tested to 1.5 times their rated working pressure at least twice within any five-year period. Pipelines should be marked with the date of test and the test pressure.*  
*Details of the Test Pressure, the Maximum Allowable Rated Pressure and the date of the test should be recorded.*
- 8.31** If the vessel uses its own cargo hoses, are they in good order, pressure tested annually to their design working pressure, conductivity test carried out, and is a record of all hose tests and inspections maintained on board? [SireYesNoNotSeen]  
**Hose age should be recorded in the BIQ.**  
*The actual condition of the portable hoses should be assessed and an observation recorded if visible deterioration, damage or breakdown is observed. Manufacturer certificate and Operator's hose's retirement policy should be available.*
- 8.33** If refrigerated cargoes are carried, is a means of hydrate control provided, and is a supply of freezing depressant maintained onboard? [SireYesNoNotSeen]  
*LPG cargoes may be dosed with a freezing depressant such as methanol or ethanol under instructions from the shipper. Use of methanol must not be made in chemical gas cargoes (Diethyl ether, Ethylene oxide/Propylene oxide mixtures with an E-o content of not more than 30%, Isoprene, Isopropylamine, Monoethylamine, Pentanes, Pentene, Propylene oxide, Vinyl ethyl ether and Vinylidene chloride). Because of the sensitivity of many cargoes to hydrate control products, the use of hydrate control must be strictly in accordance with the instructions of the shipper/charterer. There may be alternative ways of providing hydrate control other than by the use of anti-freeze compounds. Carriage of methanol is prohibited by some administrations. In the case of ethylene and LNG, in addition to causing contamination, methanol cannot be used as it freezes at -87 degrees C.*
- 8.34** Where fitted, is cargo tank insulation reported to be in good condition? [SireYesNoNotSeen]
- 8.35** Are submerged electrical cargo pumps, if fitted, isolated from their electrical supply during gas-freeing operations? [SireYesNoNotSeen]
- 8.36** Are sample lines for both liquid and vapour provided and are they fitted with valves and caps? [SireYesNoNotSeen]
- 8.37** Is low temperature pipework adequately insulated from the hull structure? [SireYesNoNotSeen]
- 8.38** If any cargo or vapour lines are insulated, is the insulation in a satisfactory condition? [SireYesNoNotSeen]
- 8.39** Where cargo or vapour lines are isolated from the structure, are joints electrically bonded? [SireYesNoNotSeen]
- 8.40** Are cargo and vapour line expansion arrangements in a satisfactory condition? [SireYesNoNotSeen]
- 8.41** Are liquid and vapour lines free to move inside their clamps? [SireYesNoNotSeen]
- 8.42** Are pipeline drains fitted with valves and caps, and in a satisfactory condition? [SireYesNoNotSeen]
- 8.43** Are relief valves fitted to the cargo pipeline system in a satisfactory condition tested and recorded? [SireYesNoNotSeen]  
**Inspector should record relief valves last tests date and frequency of tests.**



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- 8.44** Are cargo manifolds properly supported and valves made from steel? [SireYesNoNotSeen]  
*If necessary, no more than one spool piece should be fitted outboard of the manifold valve.*
- 8.45** If cargo segregations using blank flanges are fitted, are the flanges fully bolted? [SireYesNoNotSeen]
- 8.46** Are the correct product-related packings and gaskets used for every cargo transfer? [SireYesNoNotSeen]
- 8.47** Are the valves serving the cargo and ballast system in satisfactory operational condition? [SireYesNoNotSeen]
- 8.48** Is the vessel free from unauthorised connections between the bunker, ballast and cargo systems? [SireYesNoNotSeen]
- 8.49** Are the cargo pumps fitted with temperature indicators? [SireYesNoNotSeen]  
*Maximum cargo pump operating temperatures should be displayed at the cargo control position*
- 8.50** Are manifold pressure gauges fitted outboard of the manifold valves on both sides of the vessel and are they in good order? [SireYesNoNotSeen]
- 8.51** Are remote and/or local, temperature and pressure sensors and gauges in satisfactory operational condition? [SireYesNoNotSeen]
- 8.52** Are satisfactory records maintained of the calibration of key cargo instrumentation, including temperature and pressure gauges? [SireYesNoNotSeen]  
**Inspector should record key cargo instrumentation last calibration date and frequency of calibrations test.**

## Cargo Compressor and Motor Rooms.

- 8.53** Is the cargo conditioning (reliquefaction) plant and associated machinery and instrumentation in good order? [SireYesNoNotSeen]

*Records should be available of the pressure testing of cargo condensers and of the calibration of cargo system instrumentation.*

- 8.54** Is the compressor room well lit and are electrical fittings suitable for use in gas-hazardous areas and are they in a satisfactory condition? [SireYesNoNotSeen]

*The compressor room should be free of gas leaks and the ventilation system should be maintaining negative pressure. The compressor and motor rooms should be clean and free of combustible materials. Bulkhead seals between the compressor room and the motor room should be gas tight and well lubricated. Where pumps and compressors are driven by a shaft passing through a bulkhead or deck, gastight seals with efficient lubrication or other means of ensuring the permanence of the gas seal should be fitted in way of the bulkhead or deck. (IGC 3.3.2)*

*Note: Lubricator reservoirs, where fitted, should be checked to ensure they contain sufficient oil.*

- 8.55** Is the motor room access system maintaining a positive pressure and is it operating satisfactorily? [SireYesNoNotSeen]

- 8.56** If the motor room access is located in a gas-hazardous area, is it provided with an air-lock suitably alarmed to warn if both doors are opened at the same time? [SireYesNoNotSeen]

*In such cases, an air-lock suitably alarmed to warn if both doors are opened at the same time should be fitted. Airlocks and alarms should be in good order. If pressure in the air-lock is lost, the system should shut down. Access from the open weather deck to gas-safe spaces should be located in a gas-safe zone at least 2.4 metres above the weather deck unless the access is by means of an airlock. (IGC 3.5.4)*

- 8.57** Is the portable gas detection equipment in a satisfactory condition? [SireYesNoNotSeen]

*The manufacturers' recommended intervals for servicing the equipment ashore must be observed and procedures in place for the replacement of parts such as filters, at the manufacturers' recommended intervals. Use of a self-test facility does not necessarily mean that an analyser is operating correctly. An instrument may self-test satisfactorily, but then fail to register a lack of oxygen or the presence of gas. The only way to be sure that a machine is operating satisfactorily is to use a sample check gas. Cargo and bunker fuels should not be treated as free of H<sub>2</sub>S until after they have been loaded and the absence of H<sub>2</sub>S has been confirmed by both the results of monitoring and the relevant MSDS information. (ISGOTT 2.3.6.1) The use of personal H<sub>2</sub>S gas monitoring instruments by personnel engaged in cargo operations is strongly recommended. (ISGOTT 2.3.6.4).*

*Notes: Two toxic gas detectors are required on vessels carrying noxious liquids.*

- 8.58** Are fixed gas detection equipment and sample points fitted at the appropriate levels for the cargo being carried? [SireYesNoNotSeen]

*In every installation the positions of fixed sampling heads should be determined with due regard to the density of the vapours of the products intended to be carried and the dilution from compartment purging or ventilation. (IGC 13.6.2)*

*Note: Where it is possible to manually choose whether upper or lower level sampling heads should be in use, lower level sampling heads should be in use for all cargoes except Ammonia and LNG.*

- 8.59** Are cargo compressors isolated from the cargo when carrying Propylene Oxide? [SireYesNoNotSeen]

*Note: There should be approved procedures for the carriage of Propylene Oxide, including the blanking or removal of spool pieces between the cargo compressors and the cargo containment.*

## Void Spaces and Seals: Type C Tanks.

- 8.60** Are void space seals, where fitted, in a satisfactory condition? [SireYesNoNotSeen]

- 8.61** Is the environmental control of void spaces satisfactory? [SireYesNoNotSeen]

## Void and interbarrier spaces and seals. Other cargo tank types.

**8.62** Are pressure and temperature alarms tested and recorded? [SireYesNoNotSeen]

**8.63** Is the oxygen and hydrocarbon content of the interbarrier spaces regularly monitored and are the results recorded? [SireYesNoNotSeen]

*In the case of flammable products, where cargo containment systems other than independent tanks are used, hold spaces and interbarrier spaces should be provided with a permanently installed gas detection system capable of measuring gas concentrations of 0% to 100% by volume. The detection equipment, equipped with audible and visual alarms, should be capable of monitoring from each sampling head location sequentially at intervals not exceeding 30 minutes. Alarms should be activated when the vapour concentration reaches the equivalent of 30% of the lower flammable limit in air or such other limit as may be approved by the Administration in the light of particular cargo containment arrangements. Common sampling lines to the detection equipment should not be fitted. (IGC 13.6.11)*

*Notes: 30% LEL is the equivalent of 1.5% by volume. Records should be kept to demonstrate the levels and any apparent trends or changes in level.*

**8.64** Is the interbarrier space nitrogen purging system in good order? [SireYesNoNotSeen]

*Note: Review records of nitrogen consumption and running hours of nitrogen generator to confirm the efficiency of the interbarrier space. Frequent sweeping or purging with nitrogen, with resultant use of nitrogen, is used to reduce the explosive gas levels.*

**8.65** Is the pressure in the interbarrier spaces being maintained at a sufficient level to prevent ingress from the external atmosphere? [SireYesNoNotSeen]

*The secondary barrier should be capable of being periodically checked for its effectiveness, by means of a pressure/vacuum test, a visual inspection, or another suitable method acceptable to the Administration. (IGC 4.7.7)*

*Note: The interbarrier spaces should be being maintained at positive pressure and records of the pressure should be being maintained.*

**8.66** Are the relief valves for the hold spaces and primary and secondary barriers in satisfactory condition? [SireYesNoNotSeen]

*Relief valves should be tested at intervals of not more than 24 months.*

*Hold spaces and interbarrier spaces which may be subject to pressures beyond their design capabilities should be provided with a pressure relief system. (IGC 8.1)*

*Interbarrier spaces should be fitted with pressure relief devices to the satisfaction of the Administration. (IGC 8.2.2)*

*Note: Hold spaces without open connection to the atmosphere should be provided with suitable pressure gauges.*

**8.67** If a cargo heating system is fitted in the open deck, is it properly insulated, in a satisfactory operational condition and free of leaks? [SireYesNoNotSeen]

*If heating system is installed the open deck the following should be assessed: PIC training and certification; Electrical devices I.S condition. Leaking on diesel pipelines; Thermal fluid pipelines tests; Operating procedures; Room is gas tight or not; Class certification if barge is under Class; Diesel engine for power generator overspeed trip ; shutdown and ESD; barge should be manned when the heating system is working ; Inspector should record if the heating system could be shutdown remotely.*

**8.68** If diesel engines are installed on the open deck, are these certificated and approved by a recognised authority and situated outside the gas-hazardous area? [SireYesNoNotSeen]

*Diesel engines must not lie within a hazardous area. If the engine is enclosed in a watertight house, any openings into this house must be outside of the hazardous area, but the engine itself could be located within the hazardous area. There is no specific requirement on the height of the engine above the deck. Inspector should conduct the following checks:*

- Maintenance records;
- ESD system tests;
- Overspeed trips;
- any Class memoranda/remarks i.e check LEL before starting.

**8.69** Are tank access openings, flame screens and standpipes in satisfactory condition? [SireYesNoNotSeen]

## Cargo Measurement.

- 8.70** Are tank calibration tables available and approved by a recognised authority? [SireYesNoNotSeen]  
*Examples of Recognized authorities: Coast Guards, Naval architect/Engineer on behalf of Flag Administration, Class Societies representatives.*
- 8.71** Are cargo tank and/or other gauging points clearly identified? [SireYesNoNotSeen]
- 8.72** If fixed cargo level measuring equipment is fitted, is it operational, certified and regularly calibrated? [SireYesNoNotSeen]  
*Testing should be made in accordance with local, national or international regulations and a valid certificate should be on board.*
- 8.73** Are cargo tanks provided with an overfill protection system (High Level Alarms) and is the system fully operational? [SireYesNoNotSeen]  
**The means of checking the correct operation of the high level alarms should be recorded.**
- 8.74** Is the cargo high level alarm system operated during both loading and discharging? [SireYesNoNotSeen]
- 8.75** Is the cargo tank overfill alarm system independent of both the gauging devices and the high-level alarm system? [SireYesNoNotSeen]  
*The tank level gauging system and the high level alarm systems must be independent and driven by separate mechanisms.*
- 8.77** Are personnel aware of the relationship between tank filling limits and cargo temperature? [SireYesNoNotSeen]
- 8.78** Are portable measuring tapes and/or sticks available? [SireYesNoNotSeen]  
*If fitted portable gauging devices should be in good condition. Portable gauging such as ullage sticks, fabric or steel tapes may be the alternative method of measurement. In such cases, personnel should be aware of the dangers from associated electrostatic hazards.*
- 8.79** If fixed tank gauges are not fitted, are sufficient portable tapes provided to simultaneously gauge each tank being worked, if used with vapour locks are they calibrated? [SireYesNoNotSeen]  
**The number of tapes in use must be recorded.**  
*Correction for datum levels and for list and trim should be checked and approved by the organization certifying the system if ullages from retrofitted vapour locks are used for cargo calculation. Where vapour locks have been retrofitted, certificates of calibration must be provided by a recognized Classification society or cargo inspection company.*
- 8.81** If slip tubes are fitted, are they used only in emergencies? [SireYesNoNotSeen]  
*Slip tubes are generally used only in cases of emergency. A small amount of cargo vapour or liquid is released during level measurement, therefore they are a restricted type of gauging device and must not be used when toxic cargoes are carried, and in the case of flammable cargoes, only if permitted by the terminal and the charterer. If slip tubes are the only method of gauging, record the fact as an observation.*
- 8.83** If a flow meter is fitted, is it operational and calibrated in accordance with the requirements of the approving authority? [SireYesNoNotSeen]  
*Flow meters may frequently be found on small vessels and barges. If flow meter(s) is/are fitted, records attesting to the proving and calibration of the instrument(s) should be provided. These records should name the certifying authority, and record the dates when proving and calibration was conducted.*
- 8.85** Is the responsible person in charge familiar with the term 'reference temperature', and has it been determined for this cargo? [SireYesNoNotSeen]  
*Reference temperature means: The temperature corresponding to the vapour pressure of the cargo at the set pressure of the pressure relief valves when no cargo vapor pressure/temperature control is provided. The temperature of the cargo upon termination of loading, during transportation, or at unloading, whichever is the greatest, when a cargo vapour pressure/temperature control is provided.(IGC 15.1.4)*

## Venting and Inert Gas Systems

- 8.86** Is the cargo venting system in a satisfactory operational condition? [SireYesNoNotSeen]  
**Inspector should make a full description of the type of venting system fitted on the vessel.**  
*If a venting system is fitted, it must be in a satisfactory condition and operated correctly. If high velocity vents are fitted, these should be operated as designed and not jacked open. If the vessel is provided with a venting system that uses a common line shared by other cargo tanks, means should be provided to prevent vapour carryover in the event that the vessel is carrying dissimilar cargo grades.*
- 8.87** Is the vessel capable of operating in a closed condition, including ullaging and sampling? [SireYesNoNotSeen]  
*The ventilation of cargo tanks is dependant on vessel design, products carried and local regulations. Cargo tanks can operate (load & discharge) under totally closed conditions (preferred) through a designated venting system. Where no system is fitted, ventilation may be through sighting or ullage ports provided they are fitted with permanent flame screens.*
- 8.88** If vessel is handling volatile or toxic cargo is the vessel operating in close condition? [SireYesNoNotSeen]  
*Notes: A volatile product is petroleum having a flash point below 60 deg C as determined by the closed cup method of testing. If a cargo is being handled at a temperature within 10 deg C of its flashpoint, it should be considered volatile. Therefore a cargo with a flashpoint of 80 deg C should be considered volatile if handled at a temperature of 70 deg C or above.*
- 8.89** Are the P/V valves in good order, fitted with flame screens, inspected and cleaned as part of a regular maintenance routine, and are there records to support this? [SireYesNoNotSeen]  
**Inspector should record maintenance frequency of PV valves.**  
*Maintenance records will normally not be found on board, but retained with the vessel Operator. The inspector should look for physical evidence of regular maintenance.*
- 8.90** If cargo tank inlet valves are fitted which permit the isolation of individual tanks from the venting system, are these provided with positive locking arrangements and are the keys under the control of a responsible person? [SireYesNoNotSeen]
- 8.91** Is the venting system provided with full-flow secondary means of cargo tank protection against over, or under-pressurisation in the event of accidental closure of the inlet valve? [SireYesNoNotSeen]  
**Inspector should detail type of secondary venting system fitted.**
- 8.92** If an inert gas system is fitted are its components in a satisfactory condition? [SireYesNoNotSeen]
- 8.93** If the inert gas system is in use, is it operating satisfactorily? [SireYesNoNotSeen]
- 8.94** If fitted, are nitrogen cylinders and associated pipework in a satisfactory condition? [SireYesNoNotSeen]
- 8.95** If the vessel is equipped with a vapour-return system, is it operational and are personnel trained in its use? [SireYesNoNotSeen]
- 8.96** Do tank hatches, tank cleaning apertures and sighting ports appear to be liquid and gas tight? [SireYesNoNotSeen]
- 8.999** Additional Comments [SireMemo]

# Mooring

## Mooring

- 9.1** Is the vessel effectively moored? [SireYesNoNotSeen]  
*Mooring lines in use must be of adequate size to safely moor the vessel and meet the requirements of the terminal. If the barge is being kept in position solely by use of an attending tug or tugs, or if ship-to-ship transfer operations are being carried out, the safety of the operation must be assessed. Close attention should be paid to the condition of the mooring lines and their condition assessed. Sufficient spare mooring lines should be available to re-secure the vessel in the event of breakout. Mooring should be balanced. Mixed mooring is not recommended. If vessel is affected to Ship to Ship transfer suitable procedures should be in place and complied with.*
- 9.2** Are pedestal fairleads, roller fairleads, and other mooring system rollers well greased and free to turn, and are bitts and chocks free of grooving and in satisfactory condition? [SireYesNoNotSeen]  
*Rollers should be free to turn and evidence of rope, wire or corrosion noted. Inspectors should note whether the design of the fairlead is suitable for the vessel and its trade. Evidence of wasting due to corrosion should be noted. Typical design features of both barges and small bunker vessels are open fairleads. This design can lead to moorings leading upwards and jumping out of the leads. This problem is particularly evident where small vessels may lie alongside larger ships for bunkering and also in areas of a large tidal range. Dumb barges and some small bunker type barges may not be fitted with powered winches or anchoring systems, therefore particular attention should be paid to the effectiveness of moorings and condition of equipment. Each fitting should be clearly marked with its SWL.*
- 9.3** Are the winches that are employed for mooring in a satisfactory condition? [SireYesNoNotSeen]
- 9.4** When applicable a procedure should be in place for the annual testing of winch brakes, and the results should be recorded. Where self-stowing winch drums are used, the rendering load should be 60% of the MBL of the mooring line for which the winch was designed. [SireYesNoNotSeen]
- 9.5** Are satisfactory mooring procedures provided and barge personnel comply with? [SireYesNoNotSeen]  
*Procedures should cover mooring operations at terminals, non conventional berths, ship to ship*
- 9.7** Are the mooring lines in satisfactory condition? [SireYesNoNotSeen]  
*A procedure should be in place to control the use and replacement of mooring lines. The inspector should assess the effectiveness of the procedure. Mooring line certificates should be available for inspection.*
- 9.8** If synthetic tails are used in conjunction with wires, are they in satisfactory condition and is a suitable joining shackle used between the wire and the tail? [SireYesNoNotSeen]
- 9.9** If fitted, are windlasses, anchors, locking bars and cables in satisfactory condition and operating effectively? [SireYesNoNotSeen]
- 9.999** Additional Comments [SireMemo]

## Towing and Pushing Vessels

### Towing and Pushing Vessels

**10.1** Does the tug have sufficient power for the barge(s) being handled? [SireYesNoNotSeen]

#### GUIDELINES FOR TUG MINIMUM HORSE POWER

-----Tow Size-----Inland-----Coastal-----Ocean-----

0-22,500 bbls (0-3,000 m3) ---- 800 hp -- 1000 hp -- 1200 hp

60,000 bbls (8,000 m3) ----- 1800 hp -- 2000 hp -- 2500 hp

80,000 bbls (10,700 m3) ----- 2400 hp -- 2800 hp -- 3000 hp

150,000 bbls (20,000 m3) ----- 4200 hp -- 4500 hp -- 5000 hp

300,000 bbls (40,000 m3) ----- 8000 hp -- 8000 hp -- 9000 hp

Notes:

- Dual propulsion power is required for all coastal and ocean units and all inland tows greater than 30,000 bbls (4,000 m3),

- Interpolating between tow sizes will be necessary for sizes not shown,

This table is not intended to supersede local established safe practice which may already exist.

**10.2** Is the equipment provided, sufficient to handle the tow? [SireYesNoNotSeen]

*Towing equipment, winches, hawsers and bridles should be in good condition and comparable with the tugs horsepower. All components of the emergency towing system should be rated with a breaking strength equal to 1.5 times the rate bollard pull of the towing vessel. The breaking strength of the towing wire should be at least 2.5 times the certified or calculated bollard pull of the tug.*

**10.4** Do personnel demonstrate evidence of effective training and familiarity with the winch operation? [SireYesNoNotSeen]

**10.6** Do personnel demonstrate familiarity and adequate training to respond to emergency situations? [SireYesNoNotSeen]

**10.7** Does the height of eye from the tug wheelhouse provide sufficient visibility beyond the barge being towed or pushed? [SireYesNoNotSeen]

*The visibility from the tug's wheelhouse over an empty barge is an important safety issue when shifting a barge.*

**10.8** Is the size and strength of the towing wire employed, adequate for its intended use? [SireYesNoNotSeen]

*Record the size and strength of the towing wire in use.*

**10.9** Does minimum breaking load (MBL) of the towing wire size correspond to the maximum bollard pull of the tug? [SireYesNoNotSeen]

*The minimum breaking load of the towing wire should be 2.5 times the maximum bollard pull of the tug.*

**10.10** Is the towing wire in satisfactory condition? [SireYesNoNotSeen]

**10.11** Are the connections between tugs to barges and between barges being maintained in a satisfactory condition? [SireYesNoNotSeen]

*When synthetic ropes are used in conjunction with wire to connect a tug to a barge, this should be reflected as an observation.*

**10.12** Is a manufacturer's certificate provided for the towing wire(s) on board? [SireYesNoNotSeen]

*Certificates will be provided for towing wires carried on tugs but may not be found on barges*

**10.13** Is a spare towing wire or hawser on board? [SireYesNoNotSeen]

**10.14** Is the towing winch in a satisfactory condition and does it show evidence of proper maintenance? [SireYesNoNotSeen]

**10.15** Is the towing winch brake tested annually and are details of the rendering results recorded? [SireYesNoNotSeen]

*The towing winch brake tests should be conducted in accordance with the Manufacturer's design parameters.*

**10.16** If the winch is fitted with an alarm indicating wire pay-out, is this operational? [SireYesNoNotSeen]

**10.17** Is a record of inspection of the towing wire maintained; is it up to date and does it contain details of condition and dates of lubrication? [SireYesNoNotSeen]

**10.18** Is the barge fitted with towing points and a bridle? [SireYesNoNotSeen]

**10.19** Is the bridle composed of at least Grade 2 stud link chain or IWRC wire? [SireYesNoNotSeen]

<b>10.20</b> Is the bridle protected from chafing at the deck edge?	[SireYesNoNotSeen]
<b>10.21</b> Is a spare pennant or surge chain provided and if fitted, is the surge chain at least the same grade and size as the main bridle?	[SireYesNoNotSeen]
<b>10.22</b> If fitted, is the synthetic shock line at least 1.3 times the strength of the main tow wire/hawser	[SireYesNoNotSeen]
<b>10.23</b> Are the bridle ends, tow wire and surge chain connections appropriate for the current service?	[SireYesNoNotSeen]
<b>10.24</b> Is a record maintained of the number of towing miles/hours of the towing wire, and is this usage within the stipulated life of the wire?	[SireYesNoNotSeen]
<b>10.25</b> Is the barge fitted with an emergency towing system? <i>Provision of emergency towing equipment may be made in accordance with the Operator's policy or as dictated by specific circumstances.</i>	[SireYesNoNotSeen]
<b>10.26</b> Is the towing wire termination in good condition and free of damage, deformation, or significant corrosion?	[SireYesNoNotSeen]
<b>10.27</b> Is the towing wire sufficiently protected from chafing at the stern rail for the current service?	[SireYesNoNotSeen]
<b>10.28</b> Is the tug/barge pushing connection acceptable for the current service?	[SireYesNoNotSeen]
<b>10.29</b> If separate push winches are utilised, are they being properly maintained and are they in satisfactory working order?	[SireYesNoNotSeen]
<b>10.30</b> Do the two bridle legs form an angle less than 120 degrees?	[SireYesNoNotSeen]
<b>10.31</b> Is the breaking strain of the bridle at least 1.3 times the breaking strain of the towing wire?	[SireYesNoNotSeen]
<b>10.32</b> Can the emergency towing system be deployed by the tug personnel when the barge is unmanned?	[SireYesNoNotSeen]
<b>10.33</b> If manned, do the barge personnel maintain 24 hour radio communication with the tug?	[SireYesNoNotSeen]
<b>10.34</b> If the tug is in ATB service, 'Is the tug/barge connecting device operational ? <i>Connecting pins or similar device should be properly maintained and records kept.</i>	[SireYesNoNotSeen]
<b>10.999</b> Additional Comments	[SireMemo]



# Machinery

## Machinery

- 11.1** Are machinery spaces and steering compartments clean and free from obvious leaks and is the overall standard of housekeeping satisfactory? [SireYesNoNotSeen]  
*All spaces should be free of leaks from pipework and machinery. In addition, these spaces should be clean and tidy. Deck plates in machinery spaces should be free of any oil residues and be clear of any machinery or equipment that impedes safe access. Workshops, compressor rooms, chemical stores, spare gear stores, electrician's store/workshop, IG rooms, and boiler rooms should be checked. Safety notices and signs appropriate to the specific compartments should be posted.*
- 11.2** Is a planned maintenance system being followed, and is it up to date? [SireYesNoNotSeen]  
*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 Operator's procedures. Responsible personnel should be able to demonstrate familiarity with the system. If there is no records that warrants good traceability the question should be answered NO. The planned maintenance programme should include:*
- 1) Details of maintenance schedules whether carried out according to running hours or calendar;
  - 2) Period, or if condition monitoring is used as a substitute;
  - 3) Details, referenced to equipment manufacturer's instructions or experience, of what maintenance is required,
  - 4) Historical data on maintenance and repair work which has been carried out;
  - 5) Any proposed major repairs or overhauls should have a completion schedule, with spare parts verified as being on board or on order.
  - 6) Spare parts inventory.
- 11.3** Is the machinery space free from visible safety deficiencies? [SireYesNoNotSeen]
- 11.4** Are all electrical wiring and plugs installed within hazardous zones, intrinsically safe type and megger tested regularly? [SireYesNoNotSeen]
- 11.5** Is the engine space adequately lit? [SireYesNoNotSeen]
- 11.6** If the vessel is provided with an emergency diesel generator, is it in satisfactory operational condition? [SireYesNoNotSeen]  
*If an emergency generator is fitted, sufficient fuel should be provided to operate the equipment for at least 18 hours. The emergency generator should be tested at weekly intervals and personnel should be able to satisfactorily demonstrate its use. Emergency generators should be fitted with two independent means of starting. 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 a SIRE 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.*
- 11.7** Are the engine room equipment, all in good order and do they appear to be well maintained? [SireYesNoNotSeen]  
*Main engines, auxiliary engines and generators, boilers, compressors, purifier, coolers, general service pumps, bilge pumping arrangement, etc*
- 11.8** Are the fuel emergency shutdown prominently marked, operational, periodically tested and recorded? [SireYesNoNotSeen]
- 11.9** If a boiler is fitted, are their safety devices operational, tested and duly recorded? [SireYesNoNotSeen]
- 11.10** If fitted, are the batteries in satisfactory condition, regularly tested and recorded? [SireYesNoNotSeen]  
*Batteries should be installed in a watertight box and secured.*
- 11.12** Are safety devices and alarms operational? [SireYesNoNotSeen]  
*Engine room alarms should be periodically tested and recorded*
- 11.13** Are bilge alarms operational, regularly tested and recorded [SireYesNoNotSeen]
- 11.14** Are bunker tanks provided with an overfill protection system and is the system fully operational? [SireYesNoNotSeen]  
**Inspector should explain overfill protection fitted**
- 11.16** Is the emergency steering gear operational? [SireYesNoNotSeen]

- 11.18** Is the engine room instrumentation in satisfactory operation condition? [SireYesNoNotSeen]
- 11.19** Are oil tanks fitted with gauge glass closing devices of a self-closing, fail-safe type ? [SireYesNoNotSeen]  
*Devices should not be inhibited*
- 11.20** Is all moving machinery provided with effective guards where this presents a hazard? [SireYesNoNotSeen]  
*Guards should be fitted wherever the equipment presents a hazard to personnel.*
- 11.21** Are hazard/warning notices posted? [SireYesNoNotSeen]  
*Safety Security and Pollution warnings should be prominently displayed.*
- 11.22** Are the emergency escape exits clearly marked, unobstructed and adequately lit? [SireYesNoNotSeen]
- 11.23** Are fuel oil tanks, slop tanks and drums clearly labelled? [SireYesNoNotSeen]
- 11.24** Are flammable/combustible materials properly stored? [SireYesNoNotSeen]
- 11.25** Are bilges free of oil, rubbish and sediment? [SireYesNoNotSeen]  
*Oily areas indicate a lack of adequate maintenance and cleanliness. However, a small amount of oil in savealls should not be considered unsatisfactory.*
- 11.26** If fitted, 'Is the oily water separator arrangement and overboard discharge operated correctly? [SireYesNoNotSeen]  
*The overboard discharge valves on the bilge and oily water separator system must be closed and secured (lock/lashed) with a notice posted, warning against opening without proper authority.*
- 11.27** Is electrical wiring in good condition and free from exposed electrical shock hazards? [SireYesNoNotSeen]
- 11.29** Is the operation of the steering equipment satisfactory? [SireYesNoNotSeen]  
*All components of the steering gear should be in a satisfactory condition and operable. If fitted, communications with the emergency conning position and the wheelhouse should be checked and instructions posted.*
- 11.31** Is the crew familiar with the operation of the engine room emergency equipment ? [SireYesNoNotSeen]  
*Engine crew should be familiar with, in particular, Oil tanks shutdown valves, fire dumpers, emergency suction bilge valve, skylight self closing device, ventilation shutdown.*
- 11.32** Is the electrical power supply adequate? [SireYesNoNotSeen]  
*Inspector should check that the electrical power capacity in any operational case is less than 85%. Inspector should verify records in the engine log book.*
- 11.33** Are the fire dampers, skylight closing devices properly marked and operational? [SireYesNoNotSeen]

**11.34** Are suitable bunkering procedure in place and are being comply with? [SireYesNoNotSeen]

*All bunkering operations should be carefully planned and executed. Pollution caused when heavy fuel oil is spilt is particularly damaging and difficult to clean up. 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;
- Specific procedures for storage and separation of different grades/sulphur content of bunkers.
- 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 terminal to establish when bunkering can be undertaken;
- Methods of managing the handling of bunkers which have or may have a H2S or benzene content and testing procedures for determining the presence of hydrocarbon or H2S or benzene vapours;
- 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.

*Ship's personnel should always be alert to the possible presence of H2S or benzene in bunker fuel. It is preferable that a diagram of the fuel oil transfer piping be attached to the plan.*

**11.35** Are the fire main, fire pump, and sea chest valves clearly marked and labelled? [SireYesNoNotSeen]

**11.36** Is the funnel provided with an effective spark arrestor? [SireYesNoNotSeen]

*Either flame screen or Spark arrestor Silencer type.*

**11.37** Are adequate operator's instructions and procedures, and are they being followed? [SireYesNoNotSeen]

*Engineering procedures should include at least the following:*

- 1) Engine room organisation and operation;
- 2) Ensuring that all essential engine room equipment is available and fully operational;
- 3) Reporting equipment deficiencies;
- 4) Engine room emergency preparedness and actions in the event of an emergency;
- 5) Planned maintenance;
- 6) The control of spare parts.

**11.38** Is the engine room log book adequately maintained? [SireYesNoNotSeen]

*The vessel's SMS system should indicate which fields are required to be completed. Details of bunkering operations and major internal oil transfers should also be recorded. The Chief engineer should sign the log book on a daily basis.*

**11.40** Are hot surfaces, particularly diesel engines, free of any evidence of fuel, diesel and lubricating oil and the lagging and insulation in good condition? [SireYesNoNotSeen]

**11.41** Are the main switchboard, alternators and other electrical equipment satisfactorily protected from water spray? [SireYesNoNotSeen]

*If the main switchboard is not located in the engine control room or other protected location, record in 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.*

**11.42** Is deck insulation provided to the front and rear of 'electrical main switchboards and is it in good order (220V and above)? [SireYesNoNotSeen]

*Where necessary non-conducting mats or gratings shall be provided at the front and rear of the main switchboard.*

**11.43** Are seawater pumps, sea chests and associated pipework in good order and free of hard rust 'and temporary repairs, particularly outboard of the ship-side valves? [SireYesNoNotSeen]

*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.*

- 11.44** Is the emergency suction bilge valve clearly marked and operational? [SireYesNoNotSeen]
- 11.45** Are engine room emergency stops for ventilation fans clearly marked and do records indicate that they have been regularly tested? [SireYesNoNotSeen]  
*Ventilation emergency stop should be clearly marked and operational*
- 11.46** If fitted, are self-closing sounding devices to double bottom tanks in good order and closed? [SireYesNoNotSeen]
- 11.999** Additional Comments [SireMemo]

## General Appearance and Condition

### General Appearance and Condition

**12.1** Is the condition and cleanliness of the hull satisfactory? [SireYesNoNotSeen]

*The hull should be free of significant damage, indentations, oil staining, extensive coating breakdown and excessive marine growth. Hull markings, should be legible and correctly placed.*

*Barge's name should be clearly marked by bead weld .*

**12.2** If permanent fendering is fitted is it in satisfactory condition? [SireYesNoNotSeen]

*Small vessels are often fitted with permanent fendering in the form of steel round bar, wood or rubber straking. These areas are subject to heavy impact and are therefore prone to corrosion, heavy indentation and puncture.*

**12.3** Does the structural appearance and cleanliness of the weather deck appear to be satisfactory? [SireYesNoNotSeen]

*Inspection of weather decks should include checking for any evidence of wastage, structural problems including evidence of over-pressurisation, collision contact or distortion from heavy weather.*

**12.4** Is the general condition of service pipework satisfactory, is it free from significant corrosion, pitting, soft patches or other temporary repairs? [SireYesNoNotSeen]

*Hydraulic, fire mains, deck steam lines, compressed air lines and tank cleaning lines should be examined, particularly on the underside, for external indications of corrosion, and for patching or accelerated wear caused by rope abrasion. Pipe securing arrangements should be intact and permit free movement of the pipes as necessary.*

**12.5** Does the external appearance of the superstructure appear to be satisfactory? [SireYesNoNotSeen]

**12.6** Does the internal appearance of the superstructure appear to be satisfactory? [SireYesNoNotSeen]

**12.7** Are accommodation, public spaces, including smoke rooms, mess rooms, sanitary areas, food storerooms, food handling spaces, refrigerated spaces, galleys and pantries clean, tidy and in a hygienic condition? [SireYesNoNotSeen]

*Unburned fuel or fatty deposits in galley ranges, within flue pipes and in the filter cowls of galley vents can cause fire and must be maintained in a clean condition. Personnel alarms in refrigerated spaces should be in good order and operational, duly tested and records kept.*

*Oil and deep fat fryers should be fitted with thermostats to cut off the electrical power and prevent overheating.*

**12.8** Are all deck openings, including watertight doors and portholes, in good order and capable of being properly secured? [SireYesNoNotSeen]

**12.9** Is deck lighting adequate? [SireYesNoNotSeen]

*The level of deck lighting should be adequate to allow:*

- Sufficient visibility to permit safe access to all areas of the deck;
- The safe use of mooring equipment;
- The monitoring of the deck area for spills and leakages;
- The monitoring of all deck areas and the adjacent surrounding areas to prevent unauthorised access.

**12.999** Additional Comments [SireMemo]

*Remarks should be recorded in Additional comments relating to the superficial condition of the coating and appearance of the hull, weather decks, superstructure and on the condition and cleanliness of the accommodation and living quarters including hygiene and sanitation.*

## Packed Cargos

### Packed Cargos

- 13.1** Does the vessel have a cargo securing manual? [SireYesNoNotSeen]
- 13.2** Is the vessel free of stability problems and have a stability plan approved by a competent authority to carry deck cargoes? [SireYesNoNotSeen]  
*Vessels used for the transportation of packed cargoes or containers may not be purposely designed to carry them. Inspectors should pay particular attention to the vessels stability criteria to determine the suitability to carry deck cargoes or if appropriate, tank trucks.*
- 13.3** Are suitable safety notices posted? [SireYesNoNotSeen]
- 13.5** Is the portable tank & framework certified for the carriage of product by a competent authority? [SireYesNoNotSeen]  
*It should be a plate or markings indicating maximum capacity, weight of the tank, year of manufacture, test pressure, date of last test pressure*
- 13.6** If fitted, have portable tanks undergone all statutory tests within the last 5 years? [SireYesNoNotSeen]  
*Intermediate tests should be conducted at 2.5 year interval (+/-3 months) for leakage, operation of service equipment and undergone internal / external inspection of tank and fitting. In the case of portable tanks, the metal marking plate should be engraved to record the requirements of the IMDG Code Ref. Volume 1 (IMO number, Year of Manufacture, Test Pressure and the Date of the last test)*
- 13.7** If fitted with tank framework, are these fitted with adequate strengthened fixing/lifting points? [SireYesNoNotSeen]  
*Securing points should be provided on tanks / framework and the vessel. Sufficient fixing points and securing devices (steel chains) should also be available. SWL of fixing points should be clearly marked.*
- 13.8** If the cargo is carried in containers, are these in a satisfactory condition? [SireYesNoNotSeen]  
*Containers should be earthed, and fitted with a metal marking plate showing the necessary details. P/V valves, if fitted, and ancillary pipework should be in a satisfactory condition.*
- 13.9** If the cargo is carried in a tank vehicle, is the vehicle in sound structural condition & free of defects? [SireYesNoNotSeen]
- 13.10** Is the tank vehicle properly secured in accordance with a Cargo Securing Manual? [SireYesNoNotSeen]
- 13.11** Are tie-down attachments adequate to secure tank vehicles and prevent movement? [SireYesNoNotSeen]
- 13.13** Is the vehicle fitted with the appropriate number of securing points for the gross weight of the vehicle and are they adequately marked? [SireYesNoNotSeen]  
*The securing points should be capable of transferring forces from the lashings to the chassis of the freight vehicle and should not be fitted to bumpers or axles.*  
  
*Vehicle Fixing Points: The minimum number of securing points for the Gross Vehicle Mass (GVM) should be (3.5T = GVM - 2 securing points on each side of the vehicle) ; (20T less than GVM = 30T - 3 securing points on each side of the vehicle) ; (30T less than GVM = 40T - min 4 securing points on each side of the vehicle)*
- 13.14** Are drums and packages in satisfactory condition, free of leaks and clearly marked showing the cargo they contain? [SireYesNoNotSeen]  
*Lifting equipment such as barrel chains, strops, winches, cranes and derricks should be free of defects. They should all have been load tested periodically and the results recorded.*
- 13.15** Are drums stowed and lashed securely when the vessel is underway.? [SireYesNoNotSeen]  
*Drums should be stowed clear of the deck and securely lashed to prevent movement.*
- 13.16** Are electric lights and fittings located in the vicinity of the tank in satisfactory condition and are they gas tight? [SireYesNoNotSeen]  
*Light fittings must be assessed to ensure that they do not present an explosive hazard.*
- 13.999** Additional Comments [SireMemo]