Offshore Vessel Inspection Database (OVID) Programme

Offshore Vessel Inspection Questionnaire Small Craft, Second Edition (OVIQ4)

29 May 2025

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Section 1

1.1 History of the OVID Programme

In 2009, OCIMF in conjunction with the Oil and Gas Producers (OGP) organisation started the development of the Offshore Vessel Inspection Database (OVID) for launching in early 2010, which will enable OCIMF members to submit their ship inspection reports to OCIMF for distribution to OCIMF members and certain qualifying non-OCIMF members.

Participation in the programme, as either an inspecting OCIMF Member or a programme recipient, was strictly voluntary and each programme recipient determines independently how to evaluate the information contained in the reports received from OCIMF.

Under the OVID Programme, the operator of any offshore ship that is the subject of a report was given a copy of that report and the opportunity to submit written comments relating to the report, to both the inspecting OCIMF Member and to OCIMF. The written comments submitted by the vessel operator forms part of the downloaded report.

Report recipients access the OVID System Index by computer, and this permits the index to be viewed or downloaded. Any authorised recipient can download a report on any vessel at cost determined by the OCIMF Executive Committee, which may be adjusted from time to time.

1.2 Revisions to the Programme

The second edition of the Offshore Vessel Inspection Questionnaire (OVIQ2) was launched on 1 July 2015.
The third edition of the Offshore Vessel Inspection Questionnaire (OVIQ3) was launched on 17 September 2018.
This document details version 7300 of the OVIQ4 template and was launched on 21 April 2025.

1.3 Uniform Vessel Inspection Procedure

The programme requires that participating submitting companies follow a uniform Vessel Inspection Procedure. This procedure has an **Inspection Element** and a **Report Element**.

The **Inspection Element** uses a series of detailed inspection questionnaires as appropriate for the type of vessel inspected. These questionnaires address issues associated with safety and pollution prevention. Inspectors who are employed or contracted by submitting companies must answer all these questions.

Questions are, in many cases, accompanied by guidance notes and/or references to source documents. Their purpose is to aid the Inspector's response.

The **Report Element** is developed from the completed electronic questionnaire that is submitted by the Inspector, either directly to the OVID web site, or to the submitting company for further processing prior to transmission to the vessel operator and to OVID.

Section 2

2.1 The Offshore Vessel Inspection Questionnaires and OVIQ Computer Programmes

The third edition of the Offshore Vessel Inspection Questionnaires and their accompanying Inspection Reports were introduced in September 2018. The OVID system is comprised of two fundamentals elements: -

These are:

1. The **Offshore Vessel Inspection Questionnaire (OVIQ)**, which is an inspection document which relates to the operations and procedures onboard the vessel. The OVID software has a 'Variant wizard' which generates a different question set applicable to the specific type of vessel being inspected. Currently there are 31 different vessel and operational variants.
2. The **Offshore Vessel Particulars Questionnaire (OVPQ)**, which is a document that is completed by the vessel operator and OCIMF does not warrant the accuracy of any information contained within the OVPQ. The OVPQ is a detailed questionnaire of the permanent or semi-permanent characteristics of the vessel. (LOA, height, tank capacities etc.), and also records details of recent operational history. OCIMF does not warrant the accuracy of any information contained within the OVPQ and it is the operators' responsibility to update this document regularly.

Section 3

3.1 Using the OVID Vessel Inspection Questionnaires ("OVIQs")

The inspection questionnaires used in this programme contain a series of questions related to safety and pollution prevention applicable to the type of vessel that is inspected. These questions are consecutively numbered and are logically grouped into separate chapters.

Each chapter contains a series of questions to be answered by the inspector. Questions **may** be accompanied by guidance, namely:

1. Guidance notes to inspectors,

2. Reference source(s) citing regulation(s) or industry guidelines pertaining to questions; and

3. An indicator to identify issues when an inspector comment is mandatory.

The above-mentioned guidance, regulatory/industry references amplify the questions, and these are provided to assist the inspector to answer the questions.

If the guidance and references lead the inspector to conclude that the question should be answered positively, the box **"Yes"** in the OVIQ computer programme should be checked. On the other hand, if the guidance and any reference sources indicate to the inspector that the question should be answered negatively, the **"No"** box should be checked. Where appropriate, the **"Not Applicable"** box should be ticked.

The inspector **must** respond to all the questions appropriate to the type of vessel being inspected.

Failure to do this will mean that the inspection report cannot be transmitted to the OVID Internet site for processing by the Submitting Company who commissioned the inspection.

The inspector **must** insert an Observation when responding to any question where the response box is marked **"No"**. The Observation **must specify and explain** the reason why a negative response is made. The **"Not Applicable"** response is treated in the same way as a **"Yes"** response and there is no requirement for the reason to be made in the Observations section accompanying the question. However, if, in the inspector's judgment an explanatory comment is necessary, the inspector may make such comment in the **"Other Comments"** section accompanying the question **provided such comment makes amplification to assist the understanding of a report recipient as to an issue associated with a specific question**. In some cases, where the type of vessel being inspected results in one or more questions being not applicable to that type of vessel, the Report Editor is programmed to automatically answer those questions **"Not Applicable"**.

For some questions, where the guidance note is highlighted, the inspector is required to provide comment as required by the highlighted section of guidance. This requirement is flagged in the printed OVIQ by bold, highlighted, italic text in the guidance notes. In the electronic Report Editor software, it is highlighted in yellow.

At the end of each chapter there is an Additional Comments section. If the inspector has additional comments in respect of subject matter that is not covered by the specific questions in the chapter, the inspector may make such comments in the Additional Comments section.

The above listed requirements are summarised below

Box	Option	Response
Y	**Yes**	Tick **"Yes"** if, in the inspector's professional judgement assisted by the guidance (if provided), a positive response can be made to the question. If, in the inspector's judgement the Yes response requires to be amplified with further positive comments, the inspector may record such comments in the Other Comments box. Inspectors should keep in mind, that unless an unusual situation needs to be positively described, then a **"Yes"** response without comment is adequate.
N	**No**	Tick **"No"** if, in the inspector's professional judgement assisted by the guidance (if provided), a negative response should be made to the question.
NA	**Not Applicable**	Tick **"Not Applicable"** if the subject matter covered by the question is not applicable to the vessel being inspected. In some cases, the **"Not Applicable"** response is made automatically within the software and is subject to the type of vessel being inspected. If, in the inspector's judgement the **Not Applicable** response requires to be amplified with further comments, the inspector may record such comments in the 'Other Inspector Comments' section that accompanies the specific question.
	Observations and Other Inspections Comments	An Observation by the inspector is required for a **"No"** or **"Not Seen"** response. Where the question specifically calls for inspector comment irrespective of how the response box is checked, such comments are required to be recorded in the **"Other Inspector comments"** section that accompanies the question. Inspectors are free to record comments even where a box is checked **"Yes"** provided such comment makes amplification to assists the understanding of a report recipient as to an issue associated with a specific question.
	Additional Comments	The **Additional Comments** section at the end of each chapter may be used to record comments in respect of the chapter that are **additional** to those which the inspector may make when responding to the specific questions.

3.2 OVIQ Availability to Operators

Vessel operators, who require copies of the questionnaires set out in this programme, may obtain them directly from the *www.ocimf.org* website at no cost to the vessel operator.

Section 4

Conduct of Inspections

4.1 Mandatory Inspection Requirements

The following mandatory inspection requirements must be followed by inspectors in the conduct of their shipboard inspection in order for reports to meet the requirements of the OVID Programme:

4.1.1 General Requirements

1. The inspector must introduce themselves to the Master or the Master's authorised deputy, explain the scope of the inspection and discuss the preferred order in which it will be carried out, prior to commencement of the inspection. Inspectors should co-operate fully to conduct the inspection in the order that will cause the least disruption to the vessel's operations. The inspector must be accompanied by a member of the ship's staff at all times during the course of the inspection.

2. The inspector must set a good example with respect to their communications, behaviour, own personal safety procedures whilst on board the vessel, in the terminal and must wear appropriate personal protection equipment at all times.

3. Electrical or electronic equipment of non-approved type, whether mains or battery powered, must not be active, switched on or used within any gas-hazardous or other hazardous areas. This includes torches, radios, mobile telephones, radio pagers, calculators, computers, photographic equipment and any other portable equipment that is electrically powered but not approved for operation in a gas-hazardous area. It should be borne in mind that equipment such as mobile telephones and radio pagers, if switched on, can be activated remotely and a hazard can be generated by the alerting or calling mechanism and, in the case of mobile telephones, by the natural response to answer the call. Any specific Terminal requirements must be adhered to.

4. Any Observations that the inspector intends to record in the OVIQ must be pointed out and discussed 'on site' at the time with the member of the ship's staff assigned to accompany the inspector. This ensures that the nature of the Observations is fully understood and can also avoid extended discussion at the end of the inspection.

5. On completion of the inspection, some Submitting Companies require the inspector to provide a list of the inspection findings in the form of written observations, others do not. In either case, the inspector must discuss the inspection findings with the Master or the Master's authorised deputy before leaving the vessel. Other than to prepare these observations, however, the inspector must not remain on the vessel to complete the inspection report. It is recognised that on occasions this may not be possible, especially when leaving and joining the vessel is done by helicopter on vessels doing STS operations.

6. All inspectors must take into account their own rest hours and fatigue levels when conducting inspections. 'Back to back' OCIMF inspections are discouraged, and inspectors should complete and submit the report for one vessel before commencing an inspection on another vessel.

4.1.2 Additional Requirements

In addition to the general mandatory requirements list above, the Inspector:

1. **Must** respond by entering the requested information or by checking one response box for each question.
2. **Must**, where guidance to a question is provided, consider all the guidance to determine how the question should be answered.
3. **Must** carefully consider and provide a proper response to every question.
4. **Must** use objective evidence when answering each question (the assurance of the vessel's staff is insufficient evidence or proof);
5. **Must** include an explanatory Observation in the Observation section that accompanies a question when it is answered **"No".**
6. **Must** give the factual basis and specific reasons for any opinions or subjective comments made by the inspector.
7. **Must** note any deficiencies or inspector-observed conditions, even if action was taken to address whilst the inspector was on board.
8. **Must** not use a **"Yes"** response to any question where an inspector's observation or Other inspector comment contains negative elements (if there is such negative Observation or other inspector comment then the answer to that question should be **"No");**
9. **Must not,** in any Other Inspector Comment or Additional Comments:
    a. Include any overall or partial ship rating or indication of ship acceptability / non-acceptability;
    b. Include any matter unrelated to the topic of the specific OVIQ chapter
    c. Provide a summary of each chapter or summary of the inspection observations
10. **Must not** offer any comments or opinions with regard to actions to be taken in respect of any efficiencies or observed conditions noted by the inspector.
11. **Must not** at any time give any verbal indication of ship acceptability / non-acceptability.
12. **Must not** discuss or communicate by any means (verbal, written, electronic or otherwise) any findings, information gained or outcome of the inspection with any third party other than those with a legitimate involvement in the inspection process for that vessel.
13. **Must not** conduct any other inspection or be involved in the provision of any other services while conducting an OCIMF inspection.

4.2 Permitted Inspection Actions

Inspectors ***may*:**

I. Include in the "Comments" section accompanying any question, inspector comments even where the question is answered with a "**Yes**" ***provided*** such comments give useful information to the report recipient;

II. Respond to questions or provide comments on the basis of material not included in the guidance specified for the question but must note this reliance and explain reason for the reliance;

III. Include in the "**Additional Comments'** for each chapter, any comments in respect of the subject matter not addressed by questions contained in the chapter additional to those that the inspector may make in response to the specific questions in the chapter; and

IV. Respond to questions which are not applicable to either the vessel or its cargo by checking such questions "**Not Applicable**".

4.3 Other Inspection Requirements

1. All inspectors shall follow OCIMF Inspector Code of Ethics. This code is not intended to limit or interfere with the ethics policies or code of conduct of OCIMF member companies employing and/or contracting with inspectors.

2. Ship inspections shall not be conducted at night unless requested by the OCIMF Inspecting member. The vessel's operator must also concur that it is safe to carry out a night inspection and that this will not negatively impact the vessel's compliance with work and rest hour requirements.

3. Inspectors shall limit advance communications with vessels and vessel operators to that information necessary to arrange access and appropriate arrival to and from the vessel, or to communicate intended inspection plans. Inspectors shall not request information concerning the VIQ in advance of their arrival to a vessel. Inspectors shall not communicate with the vessel or vessel operator after completion of OCIMF inspection activities. Following an inspection all communication concerning the inspection shall be managed by the commissioning member.

4. The inspector should consider requesting that equipment be run and tested to confirm that it is in operational order and that officers and crew are familiar with its operation. The inspector must ensure that such requests do not cause delay or interfere with the safety and normal operation of the vessel and does not contradict any terminal local requirements or regulations.

5. It should be recognised that the overall objective of the inspection is to provide the user of a OVID Report with a factual record of the vessel's condition and standard of operation at the time of the inspection and, in turn, allow an assessment of the risk that use of the vessel might pose.

6. The scope of an OVID inspection is dependent on the size and complexity of the vessel, and a typical OVIQ inspection is expected to be **accomplished within an 8-10 hour period**. The inspector must plan their time accordingly and make sufficient allowances to have a suitable period of time available for the inspection. Inspectors must take into account the hours of rest requirements for the vessel's staff that must be observed and ensure that the OVID inspection does not interfere with these.

7. During the course of the inspection ballast/void tank entry is discouraged. Physical assessment of the condition of ballast tanks/void spaces etc can be made only in circumstances where the tank access hatches or plates can be removed, and the tank internals sighted from the deck. In any event, actual tank access should only be made at the specific instructions of the inspecting company, with the authority of the Master and provided that local requirements or regulations allow. In all cases, the enclosed space entry procedures set out in Operator's Management System, associated PTW and Operational Risk Management procedures / practices outlined in GOMO Chapter 4 must be strictly adhered to.

8. Travel for ship inspections on behalf of OCIMF member companies must, at all times, be conducted in a safe manner with due regard to industry best practice and any agreements between the inspector and member companies. Inspectors must ensure that they are able to safely conduct an inspection without undue fatigue.

9. OCIMF Accredited Inspectors shall declare to OCIMF any industry relationships that may or may be perceived to create influence within an OCIMF inspection programme or impair unbiased assessment during a programme inspection. Where necessary, the relationship must be declared within the inspector's profile.

10. OCIMF accredited inspectors are not permitted to carry out concurrent inspection or assurance activities during an inspection commissioned by an OCIMF member. A non-exhaustive list of prohibited behaviour:
    - An inspector shall not carry out 2 OVID inspections at the same time.
    - An inspector shall not carry out an OVID & CMID at the same time.
    - An inspector shall not carry out an OVID and any other operational assurance activity such as DP trials, FMEA Proving Trials, (or any other consultancy work) at the same time.

4.4 Submitting Company Guidance

In order to ensure a consistent and quality report, where possible, submitting companies are requested to consider the following points when planning and conducting OVIQ inspections:

1. It is recommended that the vessel is not inspected during lay up.
2. It is recommended that the vessel is inspected with a full crew complement on board
3. Vessel activity should be considered when conducting OVIQ. As such, periods of high activity such as docking and maintenance periods should be avoided if practicable
4. OVIQ should be commissioned in accordance with vessel class notation and proposed operation
5. The use of 'Non-SOLAS' variant is only for use on vessels **less than 500GT** which are not required to comply with SOLAS regulations
6. For vessels which fall under parallel tonnage schemes (e.g., local and international tonnage), it is expected that vessels are inspected based on international tonnage
7. The use of 'Small Craft' variant is intended for use on craft **100 GT** or less
8. Validation of OVIQ reports is expected to be conducted in accordance with OCIMF *Inspection Programmes Report Validation: Best Practice.*

4.5 Anonymous Reporting Scheme

1. OCIMF is committed to maintaining the highest of ethical and professional standards within Programmes to provide a foundation of trust within the industry. The Code of Conduct contains general guidelines for programme participation with the highest standards of ethics while the Inspector Code of Ethics guide conduct during an inspection
2. Programme users should be comfortable approaching OCIMF when there is concern that policies or procedures are not being upheld
3. Users who want to submit an anonymous report in confidence are encouraged to use this website, hosted by a third-party hotline provider, **EthicsPoint**. Users are encouraged to submit reports relating to violations stated in our Code of Conduct and Inspector Code of Ethics, as well as questions related to policies and procedure or even to provide positive suggestions and stories.
4. Access to the anonymous reporting scheme can be accessed through OCIMF OVID Inspector profile page or directly to http://ocimf.ethicspoint.com
5. NOTES
   - **EthicsPoint is NOT an Emergency Service**. Do not use this site to report events presenting an immediate threat to life or property. Reports submitted through this service may not receive an immediate response. If you require emergency assistance, please contact your local authorities.
   - EthicsPoint is not part of the inspection questionnaire validation process: Do not use this site to challenge inspection observation content, please contact the submitting company directly to discuss the applicability of question guidance

Section 5
The Distributed Report

The responses recorded in the Vessel Inspection Questionnaires (the ***Inspection Element***) serve as the basis for development of the second element of the Vessel Inspection Procedure (the ***Report Element***) distributed under the programme. The inspector's completed OVIQ must be reviewed by the submitting company prior to processing in the OVID system and transmission to the vessel operator.

The processed OVIQ is automatically converted into a report after the submitting company has processed it in the OVID System. The report does not replicate the pages of the Vessel Inspection Questionnaire but is distributed in abbreviated form. It consists of a conversion of the inspector OVIQ responses into a uniform report format. The report is divided into three sections as follows:

Section 1 General information

Contains the informational responses required in Chapter 1 of the OVIQ plus answers to certain questions from other OVIQ chapters where specific details or dates are required.

Section 2 Questions marked "**Yes**" without comment.

Lists, by index number **only**, the questions in the OVIQ which have been checked with a "**Yes**" response, but without inspector comment.

Section 3 Questions marked "**No**", "**Not Applicable**" or otherwise commented upon and any chapter ending **Additional Comments**.

Contains; in their entirety, **(a)** All OVIQ questions which have been answered with a "**No**" response, as well as the comments made by the inspector to supplement such responses; **(b)** All other OVIQ questions which have otherwise been commented upon, together with the comment; and, **(c)** Any additional comments made at the end of the OVIQ chapters.

General Information

Vessel/unit particulars

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

1.1.2 IMO Number

1.1.3 Reg number
When vessel does not have an IMO number, record vessel registration number.

1.1.4 VIN (Vessel Identification Number)

1.1.5 Country of registration of vessel/unit
If a change of country of registration has taken place within the past 6 months, record the date of change and the previous country of registration in the Comments. Refer to continuous synopsis record

1.1.6 Gross tonnage
State if vessel/unit has not been measured. State both the ITC and Flag Tonnage if available.

1.1.7 Date vessel/unit delivered

1.1.8 Date of most recent major conversion, if applicable
Provide brief details of most recent major conversion.

1.1.9 Place of inspection
Inspector to include port of inspection and country

1.1.10 Name of the company commissioning the inspection

1.1.11 Time the inspector boarded the vessel/unit

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

1.1.13 Name of the inspector

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

1.1.15 E-mail address of the operator

1.1.16 Date the current operator assumed responsibility for the vessel/unit

Additional Comments

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

Certification and documentation

Certification

2.1.1 Where applicable, are all the statutory and trading certificates listed in the guidance valid?

Inspector should undertake a spot check of certificates to validate OVPQ data. Certificates may include the following:

- *Certificate of Registry*
- *Certificate of Class*
- *Continuous synopsis record*
- *Document of Compliance.*
- *Safe Manning Certificate*
- *Bollard pull certificate (as applicable)*

Note: where applicable, the issuing authority for the DoC and the SMC may be different organisations, but the name of the operator of the vessel/unit must be the same on both. There should be a copy (which need not be a certified copy) of the DoC on board.

- *Loadline Certificate*
- *International Tonnage Certificate (ITC)*

With respect to SOLAS certificates, if the language used is neither English nor French, the text shall include a translation into one of these languages.

Note: Situations may arise in cases where a Recognised Organisation (RO) issues the original certificates and the vessel/unit's flag State Administration conducts subsequent annual surveys. In such cases, it is acceptable for the flag State to endorse the RO's certificates to attest that the annual surveys have been conducted.

2.1.2 Name of Classification society, if applicable

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

2.1.3 Does the vessel have any predefined limitations for operation?

Inspector to check and record any operating limits.

Safety management

2.2.1 Does the vessel/unit have a documented safety management system?

The Company should ensure that a fit for purpose safety management system is implemented onboard. The inspector should undertake a spot-check of the list of contents to ensure that they are:

- *relevant to the vessel/unit;*
- *written in the working language of the crew. And that they contain:*
- *emergency procedures;*
- *operation procedures;*
- *up to date maintenance programmes including engine room, deck and bridge equipment;*
- *incident investigation & reporting procedure; ISM internal audits, MOC Process, Management visits onboard, Risk Assessment Process, Master's Review, and*
- *programmes of drills.*

2.2.2 Where appropriate, is there objective evidence that the safety management system complies with the requirements of the ISM Code?

If Vessel is ISM certified evidence would be by issuance of DOC and SMC certificates.

Inspector should give status of operator and vessel with regards to ISM certification (SMC and DOC).

2.2.3 Is a recent operator's audit report available and is a close-out system in place for dealing with non-conformities?

Note: Satisfactory evidence should record that corrective action was taken to rectify non-conformities. A close-out system, which includes a time limit for corrective action, informing the operator when completed and the operator ensuring that it has been, should be in place and the inspector should ensure that the required actions have been made within the required

time. Operator's audit observations should not be used as a means to record Observations unless there is no evidence of a close out system in place, at which point those observations should be listed in this question only.

2.2.4 Does the Master review the safety management system and report to the operator on any deficiencies?

The Master's review should be carried out annually and documentary evidence should be available.

Class documentation and surveys

2.3.1 Was last drydocking/underwater survey scheduled?

Inspector to record date of last docking or underwater survey.

If the last drydocking/underwater survey was unscheduled, record observation and reason for docking / survey.

2.3.2 If applicable, Is the vessel/unit free of conditions of class or recommendations, visas, memoranda or notations?

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

2.3.3 Does the person in command or his delegate have knowledge of the vessel's stability calculations / condition?

Person in command should have basic understanding of vessel stability. State how this knowledge is achieved. E.g. formal training, vessel experience.

Additional Comments

2.99 Additional Comments

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

Crew and contractor management

General

3.1.1 Are both crew and contractors required to comply with the vessel/unit's drug and alcohol policy and testing regime?

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

Crew-specific

3.2.1 Does the manning level meet or exceed that required by the operations the vessel is engaged in?

Inspector to record minimum and actual manning.

Crew-specific (non barge)

3.3.1 Do all crewmembers hold appropriate and valid certification and is this verified on joining vessel?

Inspector should undertake a spot check of crew certification.

Inspector to check if vessel operator has a process in place for verifying crew certificates prior to boarding

3.3.2 Does the crew matrix posted for the vessel on the OVID website accurately reflect the information relating to the crew on board at the time of the inspection?

The operator is responsible to maintain up-to-date records relating to the crew and key personnel on board the vessel at any given time, using the electronic Crew Matrix that forms part of the records for each vessel which has been submitted to OVID.

Prior to boarding, inspectors can access and download the OVPQ including the Crew Matrix. This can be either printed out or downloaded and used during the inspection to check crew qualifications and experience. The crew details must be spot checked against the data contained in the matrix and an observation made in the event of any irregularities.

Inspectors must take into account that where recent changes of personnel have taken place, it is not realistic to instantly update the matrix and allowances must be made. Observations must not be made unless the personnel change(s) took place more than seven days before the date of the inspection. It is not essential that the Crew Matrix is provided in paper form and inspectors are not expected to seek a paper copy from the vessel.

3.3.3 Are Personnel hours of rest records completed in compliance with applicable regulations and are the records retained?

Inspector should undertake a spot check of records to confirm compliance with applicable regulations.

Inspector to confirm if reasons for deviation is captured within the Rest hours Records forms sighted.

3.3.4 If the Master has been newly-hired within the last 12 months, did he receive appropriate pre-command briefing, including documented understanding of the Company's expectations?

This process is conducted by shore management and should include outlining of expectations and defined responsibilities.

Check if an orientation/familiarisation on the Operator's SMS Manual was conducted for the Master.

3.3.5 Have all the deck officers received documented training for the navigational equipment fitted on board?

The documented training may be records of familiarisation, on-the-job training, training provided by shore based personnel, or CBT on board.

3.3.6 Have the crew member(s) received Medical First Aid training?

Training can be supplied by in house trainers.

Additional Comments

3.99 Additional Comments

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

Navigation

Navigation

4.1.1 Is the vessel provided with operator instructions and procedures with regard to safe navigation?

The navigation, training and bridge procedures policies should be reviewed and found relevant for the vessels trading and operational area.

4.1.2 Are navigation check lists being completed?

Example of checklist: pre-arrival, pre-departure, 500 m zone, and watch handover.

4.1.3 If applicable, does the vessel documented procedures clearly identify the actions to be followed when changing the manoeuvring position on the bridge, taking into account the physical location of the vessel in relation to the platform and/or the engine/generator status?

Procedures should include a requirement to test control functions in a safe location after changeover.

4.1.4 Is the deck logbook maintained up to date?

The inspector may accept logs in either written or electronic format where flag state permits electronic recording.

4.1.5 Do vessel/unit's officers demonstrate a full understanding of steering changeover practices?

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

4.1.6 Does the vessel have the relevant nautical charts and publications for the proposed area of operation and are they maintained up to date?

All vessels/units should carry up to date official nautical charts and all other nautical publications necessary for the intended voyage/operations. If an electronic chart plotter or alternate mechanism is used, inspector to check that present charts pertinent to the area of operations are up to date Local area requirements for plotters and interface with other aids like AIS should be considered and confirmed.

4.1.7 If fitted, are Master and deck officers familiar with the operation of the ECDIS system on board?

The Master and deck officers should be familiar with the operation of the ECDIS. Master and deck officers should be able to demonstrate the operation of the ECDIS. If no ECDIS system is fitted on board, answer the question 'NA'

4.1.8 If the vessel is equipped with a chart plotter in use, are the passage planning waypoints entered and is there evidence that the vessel has been navigated accordingly?

Inspector to check if previous passage can be replayed on the chart plotter to confirm that passage plan has been adhered to.

4.1.9 If the vessel is equipped with a chart plotter in use, is there a procedure in place to ensure that it is updated?

Inspector should describe the procedure and note that last update date.

4.1.10 Is there a passage plan prepared for routes that the vessel navigates?

Prior to proceeding on passage, the Master shall ensure that the intended voyage has been planned using appropriate charts and publications for the area concerned. Planning to be relevant for the vessel trade and operations.

Inspector to check if Passage Plans sighted include critical navigational areas and associated mitigations in place.

4.1.11 Are up-to-date navigation warnings and weather forecasts available?

Watch keeping officer should be monitoring navigational warnings appropriate to the vessel/unit's proposed area of operations.

4.1.12 Is all navigation equipment in good order?

Regardless of whether or not a vessel/unit is required by legislation to carry specific navigational equipment, if equipment is fitted then it should be operational. Such equipment may be a Radar, Echo Sounder, Gyro/Magnetic Compass, VHF, ECDIS / ENC, AIS, GPS / DGPS, Helm Indicator, Tachometer, Anemometer, Binoculars, Day Signal Lamp, etc.

4.1.13 Are navigation lights, day signals and flags adequate in number as required by flag state and in good operational condition?

Where fitted, primary and secondary systems should be in good order, and there should be a procedure to check the navigation light failure alarm.

Inspector to check if this is included in the vessel's PMS.

4.1.14 Are all sound signals in good operational condition?

Examples: Gong, Air/Electric Horn, PA system, loud hailer, etc.

4.1.15 Is there a fixed or portable search light fitted and is it in good operating condition?

Check if the fixed searchlight is capable of rotating 360 degrees.

4.1.16 Are the clear view screen and window wipers in good order?

Check if included in vessel PMS.

Additional Comments

4.99 Additional Comments

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

Safety and security management

General

5.1.1 Is contact details of the Designated Person Ashore (DPA) or appropriate shore-based contact clearly posted onboard?

Shore based contact details of key personnel should be provided. DPA contact details apply for operator holding ISM DOC.

5.1.2 Are instructions available for the operation of Life Saving Appliances (LSA), Fire Fighting Equipment (FFE) and other emergency equipment on board and are the crew familiar with these?

Instructions should be available for the operation of Life Saving Appliances (LSA), Fire Fighting Equipment (FFE) and other emergency equipment on board.

Crew should be familiar, as applicable, with the operation of the fixed fire fighting systems, the main and emergency fire pumps, the emergency steering gear, the donning and use of breathing apparatus and life saving appliances such as lifejacket, pyrotechnics.

Where liferafts are carried, crew should be familiar with their launching and operation

Consistent with safety and without interfering with the Vessel's operations, sample familiarity of key personnel with the operation of LSA /FFE equipment.

Are relevant personnel onboard familiar with the instructions and actions to take in an emergency?

Does the vessel's Station Bill contain responsibilities of each crew during an emergency situations?

5.1.3 Are sufficient personal protective equipment provided on board?

PPE may include as boiler suits, safety footwear and helmets, gloves, eye and ear protection, Personal Floatation Devices/work vests, safety harnesses, and chemical protective equipment.

5.1.4 Are the following documents available for review?

- *HSSE Meetings*
- *Tool Box Talk*
- *Job Safety Analysis*
- *Risk Assessment*

For regular HSSE meetings, minutes recording agenda and decided actions should be kept. For critical activities, risk assessment and job safety analysis must be undertaken and discussed during toolbox talks.

5.1.5 Is there at least one boat hook available for recovering lines or to assist in rescuing personnel who fall overboard?

5.1.6 Does the vessel/unit have documented procedures for Man Overboard scenarios?

Check arrangements for deploying flotation and recovery equipment.

Check that appropriate checklist is readily available on bridge. MSC.1/Circ.1447 ""Guidelines for the development of plans and procedures for recovery of persons from the water"" can be used as reference guidelines.

5.1.7 Are there records on board showing that accidents, incidents, non-conformities, including breaches of regulations and near misses are reported, investigated and closed out?

Check evidences that reporting and investigation is effective. Near misses or incidents should be investigated based on the potential of the incident.

5.1.8 Are smoking restrictions in place and are they being adhered to?

Restrictions must include specific controls when the vessel is in the 500 m safety zone. There should be no smoking at food preparation area. Common areas such as restrooms, cafeterias should be designated as nonsmoking.

Check if designated smoking areas are clearly marked.

5.1.9 Is all loose gear on deck, in stores and in internal spaces as applicable, properly secured?

5.1.10 Is there a risk Assessment System in place for the carriage and handling of hazardous substances/chemicals?
This should include the handling, storage and disposal of materials such as shipboard chemicals, lithium batteries, radioactive sources and biocides. Eyes and skin protection should be available to protect from accidental exposure or contact.

Medical

5.2.1 Are first aid kits readily available and subjected to regular inspection to confirm their contents?
Check Inspection records.

5.2.2 Is medical advice available 24hrs a day?
Medical advice should be available 24hrs a day. Emergency numbers for tele-medical services / similar arrangement, should be posted or readily available.

Drills, training and familiarisation

5.4.1 Is there evidence that new personnel, including contractors, receive safety induction?
Check familiarisation checklist and records. On-board training shall be given as soon as possible after a person joins a vessel. Such training should cover:

- *what to do if a person falls overboard,*
- *what to do if fire or smoke is detected,*
- *identification of muster and liferaft stations,*
- *location and donning of life jackets,*
- *use of the vessel's fire extinguishing appliances.*

5.4.2 Are emergency drills carried out as required and are records maintained?
Lifeboat and fire drills should be carried as required by the flag State.

Check that all personnel on board are required to routinely participate including, but not limited to, man overboard drills. Drills shall, as far as practicable, be conducted as if there were an actual emergency

Note: Emergency procedures may include collision, grounding, flooding, structural failure, fire, explosion, gas or toxic vapour release, critical machinery/equipment failure, re-start after partial or total power failure, rescue from enclosed spaces, serious injury, medical evacuation and helicopter operations.

Ship security

5.5.1 If the vessel/unit is NOT required to have an approved Ships Security Plan (SSP) because of vessel/unit's tonnage or trading area, are there Security Procedures in place?
Security procedures should be based on a risk assessment of the trading area. Procedures should contain guidance on:

- *access control; and*
- *recommended behaviour in case of security incident.*

If fitted, are crew aware of the location and operation of ship security alert system (SSAS)?

5.5.2 Are the Master and officers familiar with the company procedures for cyber security risk management, and have these procedures been fully implemented?
The vessel operator should have developed procedures for cyber risk management that:

- *Identified the roles and responsibilities of users, key personnel, and management both ashore and onboard - The officer with responsibility for cyber risk management on board.*
- *Identified the IT (information technology) and OT (operational technology) systems at risk on board such as Cargo management systems, Bridge systems, Propulsion and machinery management and power control systems, Access control systems, Administrative and crew welfare systems, Communication systems.*
- *Described technical protection measures to protect against a cyber incident such as Physical security of network components, Anti-virus software, Application software management, Back-up facilities, Control of crew internet access, Control of administrator profiles, user profiles and passwords.*

- *Described procedural protection measures to protect against a cyber incident such as Cyber security training and awareness raising for crew members, Control of local and remote access to the IT and OT systems, Control of the use of personal devices on board, equipment disposal (including data destruction), Contingency plans for possible cyber incidents.*

Inspector should check the following are in place;

- *Company procedures for cyber risk management*
- *Inventory/register of sensitive IT/OT systems*
- *Cyber Contingency plans are available in hard copy*
- *Contact details for technical support are available (from either vessel operator or external IT contractor)*
- *Records of cyber security training*

The inspector should not request to review any of the documents and records above considered to be confidential. Reference Publications: ISM Code / MSC-FAL.1/Circ.3 Guidelines on maritime cyber risk management / The Guidelines on Cyber Security Onboard Ships Version 4 / Resolution MSC.428(98) Maritime cyber risk management in safety management systems

Control of work

5.6.1 Does the vessel/unit operate a documented permit to work (PTW) system?

The system should cover, as applicable, the following activities:

- *hot work*
- *enclosed space entry*
- *work involving high voltages,*
- *working at height and over the side*
- *work on stored systems containing stored energy e.g. pressure vessels*

5.6.2 Do personnel receive formal training in the use of the PTW system?

Training on PTW system can be conducted by vessel operator shore personnel, on job training, or e-learning. PTW training records should be available.

5.6.3 If electric welding equipment is provided, is it in good order, inspected regularly and are written safety guidelines available on site?

Welding and other equipment used for hot work should be carefully inspected before each occasion of use to ensure that it is in good condition. Where required, it must be correctly earthed. Special attention must be paid when using electric arc equipment to ensure that:

- *electrical supply connections are made in a gas free space.*
- *existing supply wiring is to carry the electrical current demand without overloading, causing heating.*
- *insulation of flexible electric cables is in good condition.*
- *the cable route to the work site is the safest possible, only passing over gas free or inerted spaces.*

5.6.4 If gas welding and burning equipment is provided, is it inspected regularly and in good order?

Check that flashback arrestors are fitted and in good order. Flashback arrestors should be fitted at both the cylinders and workstation as recommended by the USA Operational Safety and Health Admin (OSHA), the UK Health and Safety Executive and other national safety authorities where long lengths of piping between the cylinders and the blowtorch are involved.

Inspector to check caps are available for each cylinder and racks are available for storage.

5.6.5 Where applicable, are all spaces that are classed as 'enclosed spaces' identified and clearly marked?

All spaces not normally ventilated should be considered as 'enclosed spaces'. An enclosed space is any enclosed area that:

- *is large enough for personnel to enter*
- *has limited or restricted means of entry*
- *is not designed for normal or continuous occupancy*

5.6.6 Are portable gas and oxygen analysers available and, where provided, appropriate to the vessel/unit's operations, calibrated and in good order?

Check calibration records are available. Calibration equipment should be carried on board unless calibration is conducted on shore in accordance with manufacturer's recommendations.

Lifting equipment

5.7.1 Are up to date records maintained for the regular inspection, maintenance and testing of all lifting equipment/devices?

Periodic inspection should be carried out in accordance with the relevant legislation and industry code. e.g. Code of Safe Working Practice. Such inspections may be carried out by third parties. All equipment, which requires thorough examination should have been identified. The inspection should include visual checks, function tests, load tests as appropriate and carried out by a competent person.

Test certificates should be available for loose lifting equipment Safe Working Load (SWL) of lifting equipment and fittings must be clearly marked. Lifting gear should be marked with a unique identification.

5.7.2 Are safety devices associated with lifting appliances fully operational?

e.g. emergency stops.

5.7.3 Is a colour-coding or alternative system in use to identify inspected lifting equipment?

Check that system is being adhered to. Wrong colour/non-coded/damaged equipment must be quarantined.

Offshore personnel transfer

5.9.1 Does the vessel/unit have documented procedures for transfer of personnel offshore?

For all methods of transfer, a risk assessment should be carried out prior to operations to ensure that transfer can be completed in a safe manner. As applicable, methods of personnel transfer can be either by man riding crane, boat landing or swing rope. Throughout the operation as minimum a boat hook and lifebuoy, with self igniting light and buoyant line, should be kept readily available for use in case of emergencies. All personnel to be transferred should be briefed by crew. Personnel to be transferred should wear lifejackets and other personal protective equipment suitable for the environmental conditions of operations area.

Does the Master have training and experience to disembark and embark passengers using proposed personnel transfer method?

5.9.2 Are there records of inspection and maintenance of life saving appliances?

Instructions for on-board inspection and maintenance shall be easily understood, illustrated wherever possible. Such inspection can be reported in the logbook.

Life saving appliances

5.10.1 Are muster lists displayed onboard?

Muster list(s) must be clearly posted and updated before the ship sails. It should describe for each crew the allocated assembly station, survival craft station and emergency duty, as well as all emergency signals and action, if any, to be taken on hearing such signals.

Are the crew aware of their roles and responsibilities?

5.10.2 Are liferafts, where fitted, in good order and within due date?

Number of liferafts carried shall be in compliance with flag state requirements taking into account area of operations.

Check inspection records.

5.10.3 Are hydrostatic releases, where fitted, correctly attached?

Check that liferaft(s) is not lashed in cradles and will float free to automatically inflate if the ship sinks. As applicable, every liferaft shall be stowed with its painter permanently attached to the vessel.

Liferafts shall be so stowed as to permit manual release of one raft or container at a time from their securing arrangements.

Inspector to check the HRUs are in-date.

5.10.4 If fitted, are survival craft portable VHF radios and Search and Rescue Radar Transponders (SART's) in good order and charged?

The two-way radiotelephone(s) should be capable of operation on the frequency 156.800 MHz (VHF channel 16) and on at least one additional channel. They should be provided with a dedicated primary battery for use in the event of a distress situation. This battery should be equipped with a non-replaceable seal to indicate that it has not been used.

Check that primary battery expiry date is not expired. The radar transponder(s) should be stowed in such locations that they can be rapidly placed in survival craft.

Check that SART(s) battery dates are not expired.

5.10.5 Are lifebuoys, lights, and buoyant lines in good order?

Number of lifebuoys shall be in compliance with flag state requirements taking into account area of operations.

5.10.6 Are lifejackets in good order?

Number of lifejackets shall be in compliance with flag state requirements; as a minimum a lifejacket shall be provided for every person on board.

Inspector to check lifejacket light condition and expiration date

5.10.7 Are lifejacket donning instructions displayed?

Ensure instructions include all types of lifejacket carried on board.

5.10.8 If vessel is outfitted with immersion suits, are the immersion suits available for use and free of defects?

Number of immersion suits carried shall be in compliance with flag state requirements taking into account area of operations.

5.10.9 Are pyrotechnics, including line throwing apparatus, in date and in good order?

Number of pyrotechnics and life throwing apparatus shall be in compliance with flag state requirements taking into account area of operations. However, independent of local legislation requirements, vessel shall carry the following minimum number of pyrotechnics:

- *4 x parachute flares*
- *6 x red hand flares*
- *2 x smoke signals (buoyant or hand held)*

5.10.10 Are the locations of life saving and fire fighting appliances marked with IMO or equivalent certifying authority symbols?

Containers, brackets, racks and other similar stowage locations for life-saving equipment shall be marked with symbols in accordance with IMO Res. A.760(18) indicating the devices stowed in that location for that purpose.

If more than one device is stowed in that location, the number of devices shall also be indicated. (SOLAS III/20.10)

5.10.11 Are LSA & FFE plans, where applicable, available and conspicuously posted?

LSA & FFE plans should be up to date and represent the current arrangements on board.

Fire-fighting

5.11.1 Are there records of inspection and maintenance of Fire Fighting Appliances?

Maintenance, testing and inspections should be carried out based on the guidelines in MSC/Circ.850. The maintenance plan shall be kept on board the ship and available for inspection. It should cover all the fire protection systems and fire fighting systems and appliances the vessel is fitted with. The maintenance programme may be computer-based.

5.11.2 Are fire mains, pumps, hoses and nozzles in good order and available for immediate use?

If fitted, check that isolating valves in fire and foam system lines are clearly marked and in good order.

Industry best practice is to have fire nozzle of dual type (Jet & Spray). Make an observation if dual type fire nozzle is not available

5.11.3 If fitted, are fixed fire detection and alarm systems in good order and tested regularly?

There should be a procedure for whenever a zone of a fire detection system is isolated to ensure that relevant personnel are aware of the isolation and the reason for it and to ensure that the zone is reinstated as soon as possible. The engine room should not be operated unmanned with any zone in the space isolated. Spaces not covered by a fire detection system should be covered by regular fire patrols. Such patrols should not utilise the bridge lookout during the hours of darkness.

5.11.4 If fitted, are fixed fire extinguishing systems in good order and are clear operating instructions posted?

Check that relevant crew are familiar with operating procedures.

Inspectors shall check that the procedures as posted and written for operation are relevant to the systems and equipment and can be followed logically and any equipment requiring operation is marked legibly.

5.11.5 If fitted, is the emergency fire pump in full operational condition and are starting instructions clearly displayed?

Consistent with safety and without interfering with the Vessel's operations, request to witness the starting and operation of the emergency fire pump. If a priming system has been fitted to the emergency fire pump, it must be Flag State or Class approved.

Inspectors shall check that the procedures as posted and written for operation are relevant to the equipment and can be followed logically and any equipment requiring operation is marked legibly.

5.11.6 Are portable fire extinguishers in good order with operating instructions clearly marked?

Each extinguisher should be clearly marked with the following minimum information:

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

Number of portable extinguishers and carriage of spare charges should be in accordance with Flag State requirements.

Portable fire extinguishers must be hydrostatically tested every 10 years or lesser period if so required by the Administration. The date of the hydrostatic test must be stamped on the cylinder.

5.11.7 If applicable, are firemen's outfits and breathing apparatus in good order, provided with fully charged cylinders and ready for immediate use?

Provided approved by Flag State, the breathing apparatus may be either a smoke helmet type, or a self-contained compressed air type.

A number of spare charges, suitable for use with the apparatus provided, shall be available on board to the satisfaction of the Administration. (Flag state)

The outfits shall be kept ready for use in an easily accessible location that is permanently and clearly marked and, they shall be stored in widely separated positions - refer Flag State guidance if available. Annual inspections should be carried out to ensure that the air quality of breathing apparatus air recharging systems, if provided, is satisfactory. (MSC/Circ.850).

Self-contained breathing apparatus should be checked for condition and satisfactory operation. With the apparatus charged and the cylinder valve closed, the drop in pressure should not be more than 10 bars in one minute. (Manufacturer's instructions) Breathing apparatus shall be a self-contained compressed air-operated breathing apparatus for which the volume of air contained in the cylinders shall be at least 1,200 l, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 min. All air cylinders for breathing apparatus shall be interchangeable. (FSS Code 3.2.1.2)

Notes: Air cylinders should be charged to not less than 10% below full. BA air cylinders should be hydrostatically tested every 5 years or lesser period if so recommended by the manufacturer. (4-Year testing intervals are customary for some composite wound cylinders.) The hydrostatic test date must be stamped on the cylinder.

5.11.8 Are accommodation and ventilation fan emergency stops and fire flaps in good order and clearly marked to indicate the spaces they serve?

Record of Testing and/or inspection should be available.

Access

5.12.1 Is there a safe means of access to the vessel?

Safety nets should be provided wherever there is a possibility of a person falling over or through the side rails of the gangway and should be rigged to prevent anyone falling between the vessel/unit and the quay. Where the rails provide protection, a safety net might not be necessary.

Regardless of whether the gangway is supplied by vessel or shore, it is the vessel/unit's responsibility to ensure that a safety net is rigged.

If the means of access are considered to be unsafe, then the inspector must not put him/herself at risk by going on board. A lifebuoy with a self-activating light and also a separate buoyant safety line attached to a quoit or some similar device must be provided ready for use at the point of access aboard the ship

Additional Comments

5.99 Additional Comments

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

Pollution prevention and environmental management

Pollution prevention

6.1.1 Does vessel carry a spill kit to address operational spills? (e.g. bunkering)
Spill kit should include absorbent pads and boom.

6.1.2 Are there containment arrangements fitted around machineries, fuel manifolds and vents to control spills in case of leaks?

6.1.3 Are there arrangements in place for the handling and monitoring of Oily Waste and to prevent ""contaminants"" discharge overboard?
Record controls in place to prevent the unauthorised discharge of oily waste. (mandatory comment highlight yellow)

Such measures shall ensure that all discharges comply with the applicable requirements (Flag state or alternate)

Check equipment logs and maintenance records.

Inspectors shall validate if the operation and testing of the OWS, if fitted, is included in the PMS; Record as an observation if it is not included in the PMS.

Waste management

6.5.1 Are arrangements in place for collecting, storing, and disposing of garbage?

6.5.2 Are there adequate arrangements in place for handling and discharge of sewage in accordance with local requirements?
Where appropriate, controls should be in place to prevent the unauthorised discharge of sewage. Such measures shall ensure that all discharges comply with the applicable requirements (Flag state or alternate).

Additional Comments

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

Structural condition

General

7.1.1 Are the hull, weather decks, internal compartments and superstructure free from visible structural defects that warrant further investigation?

Inspection of the hull should include checking for any evidence of structural problems including collision/jetty contact damage or distortion from heavy weather. Where applicable, there should be a procedure in place to inspect vessel's internal compartments (freshwater tanks, fuel tanks, void spaces……).

Inspector should sample reports if available but not attempt enclosed space entry

7.1.2 If there has been any significant structural damage to the vessel/unit, have repairs been undertaken to the satisfaction of an attending Class surveyor or relevant authority?

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

For vessels that are not classed, inspector should ensure that local Flag state inspectors or equivalent class inspectors have been involved in inspecting the vessel. If the vessel has never suffered any structural damage the inspector should respond NA.

Stability

7.2.1 Are stability conditions periodically checked in accordance with operators' procedures?

Where appropriate, records should be maintained to verify stability calculations at least for Port departure, Port arrival and when the vessel has loaded / discharged significant amounts of cargo.

Where appropriate, check that due consideration has been given to deck cargoes, free surface effects, risk of water entrapment in tubulars when undertaking stability calculations.

7.2.2 Is an approved stability book available onboard?

If a specific stability book or stability letter is available state the approving entity, Class or Flag State. Any alternative local certification can also be considered Record as an observation if none of the above are available.

Additional Comments

7.99 Additional Comments

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

Operations

Survey

8.1.1 Are there documented procedures and general safety arrangements in place for activities on the exposed working decks?

Including requirements for PPE, lifejackets, lifebuoys.

Check safety signage and availability of fall arrestor equipment for more than one person to use in open slip-ways. CCTV monitoring of working areas and slip-ways from bridge and/or instrument room.

8.1.2 Are arrangements in place for securing survey equipment on the working deck?

All loose equipment should be appropriately secured and system in place to periodically check sea fastenings. Where appropriate, vessels should have completed;

- *Evaluation of strength and load distribution on deck with respect to Survey system and auxiliary equipment*
- *Evaluation of sea fastening arrangement for the Survey system with respect to dynamic loading from vessel movement*

8.1.3 Are risk assessments carried out for all survey operations?

Check that assessments include equipment deployment and recovery operations.

8.1.4 Does the vessel/unit's Permit to Work/Lockout-Tagout documented procedure cover all survey equipment?

e.g. lockout/tag-out procedures for HP system; procedures for protecting crew from electrocution from active or powered gun arrays under repair; lockout/tag-out system for gun array power (as necessary).

8.1.5 Are communications, including backup systems, suitable for operations on the working deck?

Check communication equipment (intercoms, telephones and UHV/VHF hand-held radios) including backup arrangements for:

- *Communications between the working deck and the surveyors in the instrument room*
- *Communication between the bridge and surveyors*

8.1.6 Is fire detection/fire fighting equipment provided for seismic equipment and is it in good working order?

Foam smothering, for oil-filled seismic streamers, including smoke/heat detectors in high-risk areas.

8.1.7 Are there specific documented procedures and equipment that address streamer oil spills?

Procedures and equipment (drainage to tank) for leakage of streamer oil from seismic streamer reels: availability of oil-spill kit. Procedures for handling spillages of streamer oil and hydraulic oil.

8.1.8 Are documented procedures in place addressing the safety of High Pressure operations?

Comment on the adequacy and suitability of the following:

- *high pressure (HP) air warning lights and audible alarms; and warning signage at all entrances to gun deck*
- *lockout/tag-out procedures for HP system*
- *procedures for protecting crew from electrocution from active or powered gun arrays under repair*
- *lockout/tag-out system for gun array power (as necessary)*
- *screen or cage should be around HP manifold in gun control cabinet*
- *eye wash stations on gun deck*
- *eye and ear protection to be worn when deploying and recovering air guns*
- *procedures to prevent the use of air guns when vessel is in the vicinity of divers*
- *'Soft start' procedures to mitigate possible harm to marine mammals*

8.1.9 Are effective documented procedures in place to address streamer handling?

Confirm that checks are made on in-sea and onboard survey equipment before deployment and recovery

- *are checklists in use and regularly reviewed?*

Procedures for recovery and deployment of all in-sea survey equipment, to include:

- *towing arrangements and securing points*
- *checks on weather, water depth, possible obstructions and traffic*
- *checks of communications between deck, instrument room and bridge*
- *clear guidance on what work is permissible on the working deck during poor weather/sea conditions. Procedures to include protecting crew from electrocution from active electronic streamers*
- *power removed from streamer before opening sections on deck.*

8.1.10 Are effective emergency procedures in place that address streamer handling activities?

Procedures for streamer handling in the following circumstances:

- black-out
- engine failure
- steering failure
- collapse of diverter equipment (as appropriate for multi-streamer vessels)
- tangled streamers (as appropriate for multi-streamer vessels)

Means of severing cable at point of deployment (appropriate to seabed or ocean bottom seismic survey vessels only)

Emergency stop buttons for streamer winches and hydraulic equipment.

8.1.11 Is the vessel equipped with emergency stop buttons for streamer winches and hydraulic equipment, are they in good order and regularly tested?

Note frequency and records of tests.

8.1.12 Are documented procedures in place for the use of small boats that include working from them, personnel transfer and the launch and recovery?

Procedures for transfer of personnel at sea, including:

- *transfer only to occur if all parties agree*
- *transfer to comply with locally enforced regulations*
- *transfer only to occur if personnel being transferred are willing to be so*

Procedures for launch, recovery and all normal operations of the small boat, including:

- *test of radio communications before launch and recovery*
- *pre-launch 'toolbox' meeting*
- *use of appropriate launching and recovery arrangements.*

Procedures should include typical workboat operations such as; changing streamer sections, cleaning streamers and working on tail buoys.

8.1.13 Is the equipment listed in the guidance available for use during small boat operations?

- *dry suits, dedicated lifejackets and helmets*
- *maintenance equipment for boat and engine*
- *emergency equipment appropriates to climate and location*

8.1.14 Is survey gear lifting equipment in good order, certified and regularly inspected?

Check inspection records.

8.1.15 Are there documented procedures covering the storage, handling and disposal of lithium batteries?

Procedures including:

- *availability of suitable fire extinguishing equipment*
- *batteries stored correctly in designated areas for a defined limited period*
- *procedures established for handling lithium batteries*
- *personnel trained in handling lithium batteries and aware of special dangers thereof.*

8.1.16 Are suitable safety arrangements in place on working deck to protect personnel against moving and/or high voltage machinery?

8.1.17 Are there suitable guards in place across stern?

8.1.18 Is the survey control system integrated/connected with vessel/unit's bridge?
Do navigators/DPOs have displays showing operational status in relation to vessel/unit's position, and do survey personnel have full information on vessel/unit's track, position and propulsion status?

8.1.19 Does the vessel/unit have a Crew competence/training matrix that addresses Survey operations?
Spot check training, experience and certification records carried by personnel/crew.

8.1.20 Does the vessel/unit have a competence matrix that addresses maintenance activities associated with the Survey equipment?
Spot check training, experience and certification records carried by personnel/crew.

8.1.21 Are the instrument rooms / laboratories suitably designed, protected and in good order?
There should be two, properly marked emergency exits. Spaces should be covered with appropriate fire detection and extinguishing capability. Where appropriate, the emergency power cut off switch should be clearly marked and protected from inadvertent use.

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

Geotechnical survey

8.2.1 Are there documented procedures and general safety arrangements in place for activities on the exposed working decks?
Geotechnical Procedures

The conduct of certain geotechnical operations, including core sampling, may involve the manual handling of samples from the main deck to laboratory or testing areas. Appropriate procedures and controls should be in place to ensure that such operations are appropriately managed and handling areas are well lit, free from obstructions, clearly marked and minimise handling where possible.

If applicable, procedures should be in place to deliver lifting and handling training is in place and lifting/handling aids are provided.

8.2.2 Are arrangements in place for securing survey equipment on the working deck?
All loose equipment should be appropriately secured and system in place to periodically check sea fastenings. Where appropriate, vessels should have completed;

- *Evaluation of strength and load distribution on deck with respect to Geotechnical system and auxiliary equipment*
- *Evaluation of sea fastening arrangement for the Geotechnical system with respect to dynamic loading from vessel movement*

8.2.3 Are risk assessments carried out for all survey operations?
Risk Assessments should include procedures for the emergency recovery of seabed equipment, black-out, positioning failure.

Procedure should also address the severing cables and hoses associated with seabed equipment. Includes use of emergency stops for overside equipment, hydraulic equipment and winches.

Procedures should include location-specific requirements for instrument and compressor rooms, e.g. two exits, emergency stops, limitations on flammable materials.

8.2.4 Does the vessel/unit's Permit to Work/Lockout-Tagout documented procedure cover all survey equipment?
e.g. lockout/tag-out procedures for HP system; procedures for protecting crew from electrocution from active or powered gun arrays under repair; lockout/tag-out system for gun array power (as necessary).

8.2.5 Are communications, including backup systems, suitable for operations on the working deck?

Check communication equipment (intercoms, telephones and UHF/VHF hand-held radios) including backup arrangements for:

- *Communications between the working deck and the surveyors in the instrument room*
- *Communication between the bridge and surveyors*

8.2.6 Are documented procedures in place for the use of small boats that include working from them, personnel transfer and the launch and recovery?

Procedures for transfer of personnel at sea, including:

- *transfer only to occur if all parties agree*
- *transfer to comply with locally enforced regulations*
- *transfer only to occur if personnel being transferred are willing to be so*

Procedures for launch, recovery and all normal operations of the small boat, including:

- *test of radio communications before launch and recovery*
- *pre-launch 'toolbox' meeting*
- *use of appropriate launching and recovery arrangements*

Equipment to be available:

- *dry suits, dedicated lifejackets and helmets*
- *maintenance equipment for boat and engine*
- *emergency equipment appropriates to climate and location*

8.2.7 Is there a written documented procedure for transducer deployment and recovery?

Procedures available for raising and lowering of poles and the operation covered by a permit to work?

8.2.8 Is survey gear lifting equipment in good order, certified and regularly inspected?

Check inspection records.

8.2.9 Are there documented procedures for the launching and recovery of survey equipment, including use of checklists?

Checks made on in-sea and onboard survey equipment before deployment and recovery:

- *Are checklists in use and regularly reviewed?*

Procedures for recovery and deployment of all in-sea survey equipment, to include:

- *checks on weather, water depth, possible obstructions and traffic*
- *checks of communications between deck, instrument room and bridge*
- *clear guidance on what work is permissible on the back deck during poor weather/sea conditions*

8.2.10 Do stability calculations address the impact of lifting operations associated with seabed activities?

Assessment to include impact of overside weights on GM.

8.2.11 Are the instrument rooms / laboratories suitably designed, protected and in good order?

There should be two, properly marked emergency exits. Spaces should be covered with appropriate fire detection and extinguishing capability. Where appropriate, the emergency power cut off switch should be clearly marked and protected from inadvertent use.

8.2.12 Is the geotechnical control system integrated/connected with vessel/unit's bridge?

Do navigators/DPOs have displays showing operational status in relation to vessel/unit's position, and do survey personnel have full information on vessel/unit's track, position and propulsion status?

8.2.13 Does the vessel/unit have a Crew competence/training matrix that addresses Geotechnical operations?

Spot check training, experience and certification records carried by personnel/crew.

8.2.14 Does the vessel/unit have a competence matrix that addresses maintenance activities associated with the Geotechnical equipment?
Spot check training, experience and certification records carried by personnel/crew.

8.2.15 Are video monitoring facilities for critical positions/operations of the geotechnical system in good order?
Monitors should be at Lay Control and bridge conning position if vessel/unit's movement is critical.

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

Diving

8.3.1 Does the vessel/unit or dive spread module have a valid Dive System Safety Certificate?
State authority issuing the certificate and include diving mode - Air and/or Saturation

8.3.2 Has the system been surveyed in the last 12 months and has the Dive System Safety Certificate had its annual endorsement?

8.3.3 Has the vessel/unit's record of equipment for the Cargo Ship Safety Equipment Certificate been endorsed with details of the hyperbaric rescue unit and its capacity?
For Saturation Diving Operations, this should YES or NO only.

Inspector to provide details of hyperbaric rescue unit and state certifying authority

8.3.4 Are procedures in place for the control of the storage, handling and connection of breathing gas cylinders?

8.3.5 Are all parts of the diving system that are sited on deck protected from the sea, icing or any damage that may result from other activities on board the vessel/unit?
Freeboard should not be less than 1.5 metres - make an Observation if this is not the case.

8.3.6 Has an evaluation been carried out to ensure the vessel/unit will have sufficient intact and residual dynamic stability in all load conditions whilst the diving system and auxiliary equipment are installed on the vessel/unit?
Inspector should sight calculation records.

8.3.7 Has an evaluation of the strength and load distribution on the deck of the vessel/unit been carried out with respect to diving system and auxiliary equipment placement?
Inspector should sight records of assessment and calculation.

8.3.8 Has an evaluation of the sea fastening arrangement for the diving system, including auxiliary equipment, been carried out with respect to dynamic loading with vessel movement, including survival condition of the vessel/unit?
Inspector should sight records of evaluation.

8.3.9 Has the sewage system for the saturation system been linked up with vessel/unit's sewage system and is it fully in compliance with MARPOL IV Regulations for the Prevention of Pollution by Sewage from Ships?
If not connected to the ship's system, provide information on arrangements made.

8.3.10 Is the diving system and habitat protected from the effects of fire?
Items to be checked include:

- *structural fire protection (A60 bulkheads and doors)*
- *auto fire detection and alarms*
- *fixed fire extinguishing system*

- *portable fire extinguishers*
- *one located by entrance to space containing the diving system.*

8.3.11 Where pressure vessels are situated in enclosed spaces, is a manually actuated water spray system provided to cool and protect such pressure vessels?
System should have an application rate of 10 l/m2/per minute of the horizontal projected area of the pressure vessel.

8.3.12 Where pressure vessels are situated on open decks, are sufficient means in place to provide a water spray?
This may be provided by fire hose. If this is the case, check if hose is in place and the availability of sufficient hydrants.

8.3.13 Has the safety and integrity of the electrical connection of the diving system to the vessel/unit's system been formally assessed?
Check that records of a formal assessment and regular maintenance and inspection are available.

8.3.14 Is the integrity of the electrical power supply to the diving system ensured in an emergency?
Check that the vessel/unit's emergency power source has sufficient electrical power capacity to supply the diving system and the emergency load for the vessel/unit at the same time?

If the vessel/unit's emergency power source is not the dive system alternate source of power, state what the alternative source of electrical power is for the dive system in event of failure of main source?

The alternative source of electrical power should be located outside the machinery casings to ensure its functioning in the event of fire or other casualty causing failure to the main electrical installation.

8.3.15 Is the communication system arranged for direct two-way communication between the dive control stand and the bridge or DP control room and is a suitable back-up system available?

8.3.16 Have periodic training drills of the hyperbaric rescue system been carried out?
State frequency of drills

8.3.17 Has the hyperbaric rescue unit/SPHL been launched for test at annual survey or within the last 6 months as per IMCA guidelines?
IOGP 478 (Performance of saturation diving emergency hyperbaric evacuation and recovery) requires the launch of SPHL to be conducted every 6 months.

8.3.18 Where the primary means of launching depends on the ship's main power supply, is a secondary and independent launching arrangement provided?

8.3.19 Have calculations been conducted to evaluate the dynamic snatch and impact loadings that may be encountered by the hyperbaric rescue unit on launch and recovery, in particular taking into consideration freeboard, sea height and worst case of trim and list?
Where a diving system has been retro-fitted, check that formal calculations are available.

8.3.20 Do brakes on the handling system engage automatically in the event of power failure and are they provided with manual means of release?

8.3.21 Are risk assessments carried out for all Diving operations?
Check that assessments include equipment deployment, recovery operations, operating in a SIMOPS environment, diving between anchor lines, use of habitats, conducting operations on live equipment etc.

8.3.22 Where diving equipment is situated on the working deck are there effective arrangements in place for securing it?

8.3.23 Does the Vessel/Unit have an Emergency Drills Matrix for dive ops with a guidance section laying out recommended actions for each member of the diving project, marine and shore side personnel?
The diving contractor should develop generic emergency training scenarios and procedures. Trials and drills should be undertaken to train personnel and to test the efficiency of the procedures, the interfaces and the equipment that affect the successful execution of the Hyperbaric Evacuation Plan (HEP). Reference: IOGP 478

8.3.24 Are valid umbilical excursion charts held onboard and available to crew?
A diagram specific to each vessel should be provided in both DP and dive control to enable the DP operator and the diving supervisor to visualise the relative position of the vessel, the deployment device and the divers in relation to the worksite, and to plan operations accordingly. Reference: IMCA D 010

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

Towing/pushing

8.7.1 Is the vessel classed/certified for Towing and/or Pushing operations?
If yes, please state class or certifying notations. Make a clear statement if the certificate is more than 5 years old.

8.7.2 Is the vessel's fendering in good condition?
Fenders should be fitted in areas of the probable contact with another vessel's hull during towing assistance (e.g. pushing), ship-to-ship personnel or equipment transfer. All chains and hardware used to secure the fenders should be in good condition and the fendering placed in such a way as to avoiding steel to steel contact.

8.7.3 Is tow winch, including associated hoses and brake linings, in good order?
Record date of last brake load testing.

Inspectors shall visibly inspect each winch. Mounting brackets should be in good condition with no obvious cracks or defects. Hydraulic and air hoses shall have all fittings tights and no leaks present. Winch controls should be in good working order with minimal wastage. Winches are to be lubricated per vessel's preventative maintenance schedule.

8.7.4 Is the towing gear visually in good condition?
Inspectors to check condition of all towing condition including shackles, gobbing arrangements and observe general condition.

8.7.5 Are certificates for the towing wire and anchor handling wire including sockets available onboard?
Original wire certificates should be available. If long nose spelter sockets are on work/tow wire record as observation

8.7.6 Is there a formal, time-based retirement/replacement policy for the towing assembly?
Tow line assemblies (pennant and stretchers) must be replaced every 12 months. Any extension in replacement past 12 months shall be made based on formal analysis by a 3rd party SME and confirmation that the components are stored and maintained between use in accordance with the manufacturer's guidance.

On vessels where inspections of the tow line assembly identify significant damage, replacement may be less than 12 months. Connecting shackles must be replaced every 36 months provided they are fully inspected, tested and certified using NDT techniques annually.

8.7.7 Does the vessel maintain a towing log in accordance with IMO guidelines?
Tow log should as a minimum record the following date installed, certificate number and issuing authority, time in use, shock or unusual loads, inspection results, size, MBL, and length.

The record of service must contain confirmation of towing drum and contact surface preparation is suitable for installation and the use of towline was in accordance with manufacturer recommendations. Reference IMO MSC/Circ.884

8.7.8 Does the vessel adhere to the IMO guidelines with regard to the minimum breaking load (MBL) of the towline?
Bollard Pull (BP) less than 40T then MBL= 3.0 x BP;

Bollard Pull (BP) = 40T to 90T then MBL = (3.8-BP/50) BP;

Bollard Pull (BP) greater than 90T then MBL = 2.0 x BP (all numbers in tonnes).

Reference IMO MSC/Circ.884

8.7.9 Does the vessel have procedures, including contingency plans, in place that address towing and pushing activities?
The contingency plan should include MOB, measures to be taken following the loss of tow, towline parting, propulsion failure and the onset of adverse weather, including heaving to and taking shelter.

When vessel is engaged in towing operations do procedures require all weathertight doors, hatches, manholes, ports and windows on the weather deck required to be closed and secured to prevent downflooding in the event of deck edge immersion?

A check to ensure that such arrangements are closed should be included in a pre-towing checklist. They should also be easily identifiable, for example by painting doors and hatches a different colour or with a warning on both sides saying "To remain closed while towing". Should a situation arise where tension in the towline causes the tug to heel over and the deck edge to be immersed, the delay in down flooding afforded by having watertight integrity on the weather deck may be vital in providing sufficient time for the quick release mechanism to be activated or for the tug to be manoeuvred to lessen the tension in the towline.

8.7.10 Does the vessel have a searchlight that can be directed from the vessel's main steering station and is it in good working order?
Searchlight should provide illumination both forward and aft, allowing tug to approach the tow either bow or stern on.

8.7.11 Does the vessel carry a spare towline, stretchers, shackles and associated equipment that meet all the requirements for the main gear?

8.7.12 Is the towing winch equipped with two drums and a redundant drive mechanism or equivalent procedures?
If the towing winch is equipped with two drums, check that the spare towline is stored on the winch drum, readily available for use. Preference is to have on the drum, otherwise spare towline should be in position and so arranged to be easily, quickly and safely effected. If no redundant drive mechanism is fitted, ensure procedures include operating on a fixed towline basis.

8.7.13 Are all wire rope terminations on board made with hard eyes with evidence that socketing has been done by a competent person?
If any terminations use long nose or hand-spliced, respond 'No' and provide an observation.

8.7.14 Is the winch fitted with equipment to measure the tension of the towline and is the information displayed in the wheelhouse?
Inspectors shall sight and record the date of last calibration. Calibration may be a full calibration done during a bollard pull test or, in the case of older models, may be done by setting the tension monitor to zero when there is no tension on the winch.

8.7.15 Is a tow winch brake alarm fitted and audible in the wheelhouse?
Alarm to be set for slippage/overloading of winch.

8.7.16 Does the vessel have a tension gauge and/or tension limiter to monitor bollard pull and is it regularly calibrated?
Tension gauge should be calibrated annually. Inspector to document date of last calibration.

8.7.17 Are records of inspection and service of the towline available on board?
There should be evidence that wires are regularly lubricated. Inspector should check first layers of towing wire and look for flattened areas, broken strands, heavy external corrosion or kinks.

Inspector should confirm records are available to demonstrate destructive testing is carried out on a periodic basis.

8.7.18 Does the vessel Operator have an adequate replacement policy with valid certificates for the towing line(s) in use?
Replacement policy should be based on Manufacturer's recommendation and periodic onboard line inspections. Independent third-party testing results should be used to verify the length of service time.

8.7.19 If using High Modulus Polyethylene (HMPE), is the contact surface for the HMPE tow line clean and sufficiently smooth to avoid damage to tow line?

Contact surface should be clean and smooth with non-abrasive fittings to avoid damage. Surface maintenance should be part of routine inspection program.

8.7.20 If applicable is there a system for prevention of chafing of the tow-wire?

Sufficient towing wire protectors shall be provided to prevent the towing wire from being damaged by abrasion and chafe against tow bars, cargo protection rails, bulwarks or stern roller.

8.7.21 If applicable, does the vessel have a suitable towing wire arrangement to prevent girting?

Risk assessment, procedures and checklists in place to address the issue of girting. A towline under tension will exert a heeling moment on the tug if the line is secured around amidships and is leading off toward the beam. If the force in the towline is sufficiently powerful, it may overcome the tug's righting lever and cause it to capsize. Girting can occur very rapidly and incidents have occurred where crew members have not been able to escape in time. Moreover, it should not be assumed that the winch or winch brake will render or that the towline will break before a potential girting situation occurs as less force may be required to capsize the tug.

8.7.22 Are emergency release systems regularly tested and records maintained?

Comment on the frequency and nature of testing (under load or static) and crew familiarity with the nature of the release. Maintenance and testing of these systems should be included as part of the planned maintenance regime.

8.7.23 If towline is not provided with quick release capability, does the vessel have cutting gear readily available?

There should be documented procedures available and associated risk assessments for the cutting of such wires in an emergency.

8.7.24 If used, do shock lines and/or towing stretchers have the capability to deal with the expected dynamic loads?

Where used, stretchers shall have a minimum MBL of 3 times vessel bollard pull. Reference: OCIMF Static Towing Assembly Guidelines (STAG)

8.7.25 Has the Master appropriate experience of towing/pushing operations on this particular type of vessel?

State Master's experience. For U.S. mariners (license endorsement or Towing Officer Assessment Record) or countries which require documented towing competence assessments or a towing endorsement on their license, is such license endorsement or documented assessment in place.

8.7.26 If applicable, have the Master and/or any officers with direct responsibility for ship handling received appropriate formal training in ship handling for non-conventional propulsion system?

Examples of non-conventional propulsion systems: Azimuth Stern Drive, Voith Schneider or Rotor Tug Propulsion.

Master and/or any officers with direct responsibility for ship handling should undertake a formal ship handling familiarisation course or programme having the objective to maximise the benefits of propulsion fitted and enhance the efficiency of towing operation. This can be a combination of real and/or simulated environment. Participation in any such programme should be recorded.

8.7.27 Are risk assessments carried out for all towing/pushing operations?

Check that assessments include equipment deployment and recovery operations.

8.7.28 Is the vessel fitted with necessary towing navigation lights for compliance with Collision Regulations?

8.7.29 Are the Master and officers aware of vessel performance capabilities and limitations?

Inspector to interview Master/officers on this topic and identify what limiting criteria is used for reference (including weather limitations, thruster limits, etc).

8.7.30 Are deck officers aware of the stability conditions during towing operations and understand limitations associated?

All the loading conditions reported in the trim and stability booklet, with the exception of lightship, should have been checked by class in order to investigate the ship's capability to support the effect of the towing force in the beam direction.

Master of the vessel should receive information in the Trim and Stability Booklet regarding cargo and/or ballast limitations, list of protected flooding openings that need to be kept closed, wind and/or wave restrictions, etc., necessary to ensure that the stability is in compliance with the criteria applicable.

If any loading condition requires water ballast for compliance with the criteria, the quantity and disposition should be stated in the Guidance to the Master.

8.7.31 Are the calculated indirect towing forces available to the Master and deck officers?

Guidance - Indirect towing is a method used by tug to exert dynamic forces on the tow line substantially beyond its static bollard pull; e.g. using a tug's weight, bulk and underwater surface area or by turning obliquely to a tow line to produce additional forces to stop or turn a ship under way.

8.7.32 Does the Operator have good visibility of the work area from the vessel's control station?

Operator refers to the vessel master or deck officer who is on watch and handling the vessel.

8.7.33 If there are visibility limitations caused by physical vessel design, are there risk mitigations employed to address them such as radios and talk back devices and are they in good working order?

If visibility is limited are there means such as radios or deck talk-back boxes used to communicate with crew. Inspectors shall ask crew to operate all such devices and note what the visibility restrictions are and how they are addressed by vessel crew.

Inspectors should determine if the vessel has a folding mast and if precautions are being taken to avoid the mast making contract while working alongside a vessel.

8.7.34 Is there a sufficient number of portable VHF or UHF and spare batteries available on board?

Available quantity should take into account the need for communication of tug personnel deployed on board an unmanned tow for inspections or during an emergency.

8.7.35 Is there a notice posted on the bridge giving instructions for emergency release procedures?

To include, e.g. the operation of winch stops, wire release and the shutdown of associated systems. It must be stated that towing must be discontinued, the gear and equipment relieved or emergency released if the vessel is exposed to greater load/force/tension than anticipated in the plans.

8.7.36 Are bollard pull figures available for when power is diverted to transverse thrusters or other large power consumers?

Use of thrusters and/or winches may reduce the available power for main propulsion resulting in a reduced bollard pull.

Masters should be aware that bollard pull, as measured for the vessel's certificates, in some cases, does not allow for the power used by deck machinery, thrusters and other consumers diverted from the main propulsion. As a minimum, curve showing the maximum available bollard pull for anchor handling as function of total electrical power balance (accounting for the power consumption of side or azimuth thrusters and winches) must be available to crew.

8.7.37 Does the operator have a policy in place covering the use of recessed bitts?

A recessed bitt is defined as a bitt inset into the ship's hull above the water line used to connect the tow line. Where applicable, inspectors should look for a formal policy that covers working with recessed hull bitts and require extra caution for the tug crew when connecting/disconnecting the tow line.

8.7.38 If the vessel has a STAPLE, is the SWL for the staple and the angles of operability known to the vessel master and deck officers?

Guidance - Inspectors shall list the SWL of the Staple. Staple may also be referred to as the fwd towing staple or towing fair lead.

8.7.39 Does the vessel have bow towing capability when conducting static tow operations?

8.7.40 For vessels engaged in static towing operations, does the towing assembly comply with the recommendations of OCIMF Static Towing Assembly Guidelines (STAG)?

8.7.99 Additional Comments

If the Inspector has comments in respect of the subject matter covered by the Chapter additional to those which the

Inspector may make in response to the specific questions in the Chapter, the Inspector should include such additional comments in this section.

Supply

8.8.1 Is the vessel provided with operator's policy statements, guidance and documented procedures with regard to safe supply boat operations?

Specific to operational matters, such as cargo stowage, handling of cargo, IMDG and NLS.

8.8.2 Does the vessel carry out risk assessments for specific supply operations?

Risk assessment should include wind and sea conditions.

8.8.3 Are officers aware of maximum deck load capacity and deck strength?

8.8.4 Has a formal risk assessment been completed for all cargo operations that the vessel is likely to perform offshore?

Risk assessments should specifically capture the risks of the vessel working stern to weather particularly with "open stern" vessel.

Inspector to verify that the Safety Management System provides clear guidance in the following areas and officers are aware of this guidance:

- *triggers that would cause cargo operations to be stopped requiring further risk assessments to be performed so as to determine if additional barriers are required in order to resume cargo operations. These triggers include, but are not limited to, water being shipped on deck, vessel motion, vessel orientation (stern to weather / head to weather), current and expected sea state*
- *eliminating/minimising unsecured cargo during the cargo securing process*
- *arrangement of cargo placement and tank contents so as to minimise stern trim to maintain sufficient freeboard at the stern*
- *cargo placement to provide unobstructed escape routes for crew working on deck*

8.8.5 Does the vessel have a clear deck policy and is it implemented onboard?

Inspector should check policy and procedures are in place to actively manage deck operations. Reference: OCIMF Deck Cargo Management onboard Offshore Vessels G-OMO, Chapter 9.6

8.8.6 Does the operating manual include documented procedures for restoring stability in case unstable conditions develop during cargo operations and are the officers aware of corrective action to be taken?

Do all officers know how to operate stability program?

Does Master standing order state that Duty officer should call Master if unsure of vessels stability condition during cargo operations?

8.8.7 Are officers aware of the dangers of entrapped water on deck particularly when carrying pipe cargoes?

Ref: 2008 IS Code

8.8.8 Are officers aware of the effects of free surface particularly when transferring liquids at sea?

8.8.9 Has the deck area been marked to identify areas where cargo must not be loaded?

When loading deck cargoes care should be taken to avoid any obstruction to safety zones, freeing ports/drainage arrangements, doors and hatches or aft mooring station.

8.8.10 Are Material Safety Data Sheets (MSDS) on board for all the products being handled and are all officers familiar with their content?

The cargo plan can be produced from a shore base planning group but there should be some evidence that the vessel crew/captain have reviewed this, know where the dangerous cargoes are located and found it acceptable.

8.8.11 Is there a system, including back-up, to ensure effective verbal communication between the vessel deck, vessel bridge and installation?

8.8.12 Are the emergency stops for bulk transfer pumps tested and are records available?
Record date of last test and frequency of testing programme.

8.8.13 Is there evidence of formal pre-transfer checks being held between the vessel/unit and the receiving/discharging facility before the transfer of Bulk Liquids begins?
This question references bulk transfers only and not bunkering/fuelling the vessel. Inspectors are to validate a documented pre-transfer checklist is in place and forms part of the that is being completed for each fuel or Hazardous and noxious bulk liquid.

8.8.14 Are all bulk cargo tanks, pumps, valves and pipeline systems in good order and fully tested as appropriate?
Bulk cargo pipelines should be colour coded and free of soft patches or other temporary repairs. Bulk cargo connections should be clearly marked/colour coded and blanked or capped when not in use.

8.8.15 Are there established routines to monitor ventilation from tanks containing hazardous or flammable materials, including oil based muds?
Ventilation from tanks containing hazardous or flammable materials should be monitored for the formation of hazardous conditions on the vessel i.e. Flammable, explosive, toxic vapour accumulation. A plan should be in place to both prevent the occurrence hazardous vapour accumulation.

8.8.16 Are safe areas beyond the crash barriers clear of obstructions and easily accessible to the crew from the working deck?

8.8.17 Are tugger winches and wires associated with positioning cargo in a in good order?
Check certification and inspection records. Check that protection is provided for operators.

8.8.18 Is the deck cargo securing/lashing equipment in a good order?
Check records of inspection.

8.8.19 Are bulwarks, cargo stanchions and the deck sheathing free of defects?

8.8.20 Does the 500 meters zone pre-entry check list require vessel propulsion and machinery to be set up in such a way as to ensure redundancy whilst carrying out supply operations?
Inspector to document what procedures are in place. As a minimum, redundancy should address fuel and power supply. For DP vessels, expectation is that they will operate in line with FMEA all times when manoeuvring within a 500m safety zone.

8.8.21 Has the vessel station keeping remained incident free within last 12 months?
If No then give details of incidents.

8.8.22 Are hose connections and coupling colour codes compatible with Industry Guidelines?
Hose connection should be clearly marked/stencilled as for what purpose they serve or colour coded in line with industry guidelines such as IMO OSV code or GOMO guidelines.

Are camlock couplings locking levers (if used) secured against accidental opening under pressure?

8.8.23 Are Data Cards available on board for visited offshore installations?
Data Cards should contain information on crane operating limits, the location of prohibited areas, submerged obstacles, production risers, etc.

8.8.24 Does the vessel have a 500m entry check list and is it in line with Industry guidelines?
500m checklist should follow guidelines of GOMO or other industry standards.

8.8.25 Is there evidence that 500m Safety Zone pre-entry checks have been carried out in conjunction with the installation?

8.8.26 Has the bulk cargo pumping and dry bulk systems been verified as operational?
Check the Log for recent bulk cargo operations and whether any delays were experienced due to the vessels bulk system.

8.8.27 Is there evidence that bulk backload are carried as per operator's procedures and industry best practices?
Ref: GOMO

8.8.28 Have all potential hose snagging points been identified and suitable precautions put in place?
Ref: GOMO

8.8.29 Are hazardous cargoes are carried in compliance with the IMDG code segregation requirements?
Check segregation of hazardous cargoes as per relevant section of the IMDG code.

Check if Radio-active material was carried on board and if it was in limited quantity and if required paper work was in order.

8.8.30 Is there evidence that bulk hoses are handled as per operator's procedures and best industry practices?
Are hose hanging off pins fitted?

Crew aware of use of hose hanging off procedures and Risk Assessment in place?

Are procedures in line with GOMO or other industry guidelines?

8.8.31 If carried, are the hoses and connections used for the transfer of bulk liquids free of defects?
Records to be sighted confirming regular tests for pressure. Confirm there is a process of routine inspection of hoses.

During operations, inspection of hoses is primarily by 'close visual inspection' of the entire hose length, paying particular attention to the end terminations. Close visual inspection means a visual check of the entire external area of the flexible hose assembly paying particular attention to blisters, deep lacerations or abrasions exposing inner core or fabric, unravelling of the outer cover, surface cracking and misalignment of coupling paint marks.

Floatation collars should be secure and in the correct position.

Water should be used to carry out leak tests wherever possible. The use of compressed gas such as air or nitrogen for any form of leak or pressure test is not permissible because: large volumes of pressurised gases are dangerous; hoses are not designed for pressurised gas; leaks in hydrocarbon hoses can produce a flammable mist; pinhole leaks are not always detected.

8.8.32 If carried, are all transfer hoses routinely tested?

8.8.33 If carried, are transfer hoses fitted with lifting saddles and stowed in racks?

8.8.34 If carried on board, are transfer hoses fitted with flotation collars?
Check also fitted with reflective tape. Number and distribution of floatation collars to be in accordance with guidance contained in G-OMO

8.8.35 If vessel/unit is classified to carry Methanol or other alcohol based substances, are items listed in guideline adhered to?

1. *Is the vessel equipped with an alcohol resistant type foam extinguishing system?*
2. *Suitable procedures in place for loading, discharging, inerting*
3. *Are cofferdams and cargo tanks inerted (if applicable)*
4. *Does the Master and crew have training to carry LFL cargoes*

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

ROV operations

8.14.1 Is there evidence that risk assessments are carried out for all specific tasks related to ROV operations?

8.14.2 If the vessel has been modified to carry out ROV Operations, have the additional weights been included in the vessel's stability information?
Inspector should review MOC provided ensuring changes to stability information to have Class approval and this should be evident in the vessel's stability booklet.

Check that any limitations have been documented and that key personnel are aware of them. Example limitations may include restrictions on the number of slack tanks and/or requirements to have tanks full or empty during ROV operations.

8.14.3 If obstructions exist that impact on the views of ongoing operations from the vessels bridge, have CCTV cameras been installed?
The CCTV cameras shall be positioned such that the area obstructed by the ROV or supporting equipment is now visible on a TV screen which is clearly visible from the conning positions.

Inspectors should make note in other comments section if recording functionality is not available.

8.14.4 Is there a system, including back-up, to ensure effective verbal communication between the navigating bridge and ROV control station?
Primary and back up communication systems must be independent of each other (a single VHF unit with a primary and back up channel does not meet this requirement).

8.14.5 Are protection rails fitted around the ROV work site?

8.14.6 Are operational procedures for ROV operations included in the vessel's SMS or specific operations manual?
Do these procedures specify minimum manning in all departments while conducting ROV operations?

Do these procedures specify maximum environmental limits for launching, recovery and operations?

Where the ROV is operated by a third party how are their operating procedures approved and included within the vessels operating procedures?

8.14.7 Does the vessel/unit have a crew competence/training matrix that addresses ROV operations?
Spot check training, experience and certification records carried by personnel/crew.

8.14.8 Does the vessel/unit have a competence matrix that addresses maintenance activities associated with the ROV equipment?
Spot check training, experience and certification records carried by personnel/crew.

8.14.9 Does the vessel have contingency plans in place that address ROV operations?
The contingency plans may include for example; Loss of ROV, failure of communications or positioning, secondary recovery methods, recovery in adverse conditions, entanglement of ROV umbilical.

8.14.10 Are sea state limits clearly specified for the launching and recovery of ROV equipment?
Where more than one ROV is fitted limits may differ depending on type (work/observation) of ROV and whether launch and recovery is over the side or through a moonpool.

8.14.11 Do the operational procedures address ROV operations within anchor patterns, during diving operations or close to subsea obstructions?

8.14.12 Is the ROV system integrated and/or connected with vessel/unit's bridge to show the ROV position in relation to the vessel/unit?
Do navigators/DPOs have displays showing operational status in relation to vessel/unit's position, and do ROV personnel have full information on vessel/unit's track and propulsion status?

8.14.13 Are suitable safety arrangements in place on ROV spread around moving machinery and high voltage equipment?
This could include procedural barriers, physical barriers and signage.

8.14.14 Are local emergency stops for the ROV system available, in good order and regularly tested?
Check test records.

8.14.15 Are ROV Umbilical excursion charts available on the bridge at the conning position, are they used within the risk assessment process of operational planning of vessel station keeping?
Inspections should review location ROV umbilical excursion charts, comment should be made if not available with vicinity of conning station

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

Crew Transfer Vessel

8.18.1 Is the vessel registered as a High Speed Craft (HSC) as defined in SOLAS or other Code?
State Code if not SOLAS and issuing authority.

8.18.2 If registered as a High Speed Craft, does the vessel have a copy of the company's 'Permit to Operate High-Speed Craft'?
State HSC Code issuing authority.

8.18.3 Have noise levels been assessed?
The noise level in public spaces and crew accommodation should be kept as low as possible. A risk assessment of noise and vibration impact should be considered which should address passengers and crew

8.18.4 Are crew specifically trained for crew boat operations?
For example, passenger transfer/control and evacuation. Additional STCW requirements for HSC. Induction and Safety Briefing videos.

8.18.5 Are effective security documented procedures in place?
Procedures are in line with ISPS requirements.

8.18.6 Do documented procedures exist for personnel transfer and transit operations and define safe access routes?
Including, for example, definition of safe access routes, segregation of passengers (ongoing and offgoing) and cargo, provision of handrails, deck marks, non-slip coatings, target area for frog/basket.

8.18.7 Is there a gated bulwark in way of personnel transfer areas?
Where there is no gated bulwark are there suitable provisions for safe personnel access?

8.18.8 Are there lifebuoys and a formal system to alert in case of man-overboard, on the personnel transfer deck?
Inspector to state when the man-overboard alarm last checked. If there is no man-overboard alarm available, there should be formal procedures in place to manage man-overboard situations during personnel transfer operations.

8.18.9 Are sufficient immersion suits or thermal protective aids carried?
Depends on location. Covering crew and passengers.

8.18.10 Are passengers given a pre-embarkation and pre-disembarkation briefing?
Passengers given specific briefing on do's and don'ts, signs posted, etc. Covering method of disembarkation, e.g. Surfer landing, Frog, Billy Pugh, pilot ladder etc.

8.18.11 If a Passenger Evacuation System is fitted, is it in good order?
Record date last serviced.

8.18.12 Has a passenger evacuation exercise been conducted?
Record date of last exercise.

8.18.13 Are emergency alarms audible in the passenger accommodation areas?

8.18.14 Do all crewmembers have dedicated bunks in the vessel accommodation cabins?
If vessel is not fitted with dedicated accommodation, inspector to comment on what is in place for crew during rest periods.

8.18.15 Are passenger safety briefings carried out?
Safety briefings should be carried out on every voyage and cover safe boarding, disembarkation and general safety whilst onboard.

8.18.16 Are passenger areas clean and maintained in good order?
Passenger areas should be well maintained and provide a safe and comfortable environment for passenger transit. This includes air conditioning, toilet facilities, passenger seating, lighting, noise levels, etc. Seatbelts should be available, in good order, for all passenger seats.

8.18.17 Are searchlight(s) available and in good order?

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

Landing Craft

8.20.1 Is the Bow door clearly marked with the SWL?
There should be certification and a class approved calculation for the bow door arrangement.

8.20.2 Is there good visibility from the bridge, unaffected by the bow door?
In event that visibility is obstructed by the ramp, there may be viewing windows fitted into the ramp. If visibility is obstructed, it may be that the ramp has been lengthened without notification and approval of Class or the Flag State. Check against the GA drawing for the vessel.

8.20.3 Is there a written procedure in the vessels SMS to cover deployment and stowing of the ramp?
Documented procedures should require visual verification locally to ensure that locking devices are engaged and secure.

8.20.4 If fitted, are audible and/or visible alarms during ramp deployment and stowing in good working condition?

8.20.5 If fitted, are the visible indication in the wheel house confirming that the ramp is secured for sea in good working condition?

8.20.6 Are secondary securing arrangements fitted to the ramp?
Verify that there are robust secondary securing arrangements to lock the ramp in the closed position whilst in the seagoing mode.

8.20.7 Are the forecastle deck areas either side of the ramp fitted with safety rails?
The railing should be sufficient to permit personnel to safely operate the ramp and handle mooring lines.

8.20.8 Are the freeing ports clear and freely draining?
As a consequence of water being forced onto the deck, operators will sometimes fit hinging flaps, fixed rubber flaps or cowlings.

The Inspector should verify that such devices do not limit the ability to freely drain water from the deck. Loss of stability through the free surface effect is a concern with this vessel type.

8.20.9 Is the bow area free of any significant damage?
By the very nature of the vessel design, frequent beachings may result in damage above and below the waterline. It is recommended that the Inspector look carefully in this area.

8.20.10 Is the vessel fitted with cooling systems and machinery that will allow auxiliary systems to operate in shallow waters or whilst grounded?

Keel cooling systems, air cooling and other specialist design features may allow the vessel to maintain services whilst grounded.

8.20.11 Are air pipes, ventilators, hatches etc on the main deck protected by railings?

The inspector should verify that this equipment is not damaged through cargo operations.

8.20.99 Additional Comments

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

Dredging

8.21.1 Are operational procedures for dredging included in the vessel's SMS or specific operations manual?

Do these procedures specify minimum manning in all departments while operating in the dredging mode?

Do these procedures specify maximum environmental limits for launching, recovery and operations of the dredging equipment?

8.21.2 Are sea state limits specified for the launching and recovery of dredging equipment?

Dependent on dredger type this could be lowering/recovery of cutter head or bucket, launching recovery of the drag head/arm, lowering and recovery of water injection equipment.

8.21.3 Are there documented procedures and general safety arrangements in place for activities on the exposed working decks?

Including requirements for PPE, lifejackets, lifebuoys. Check safety signage and availability of fall arrestor equipment for more than one person to use where Piping, Davits, open chutes, crane housings, or hose access areas may need to be accessed. Ensure safe walkway access between cargo holding areas. CCTV monitoring of working areas and remote equipment from bridge and/or instrument room should be available.

8.21.4 Are there documented procedures for the dredging, carriage and discharge of material, and are they complied with?

Should be vessel specific and also include limitations such as wind/wave height and vessel movement.

8.21.5 Are risk assessments carried out for all operations?

Check that assessments include deployment and recovery operations of equipment to direct cargo to seabed.

8.21.6 Are communications, including backup systems, suitable for operations on the working deck?

Check communication equipment (intercoms, telephones and UHF/VHF hand-held radios) including backup arrangements for:

- *Communications between the working deck, spoil handling areas and the navigators/surveyors in the bridge/control room.*
- *Communication between the bridge and surveyors.*

8.21.7 Is all cargo dredge spoil handling equipment in good order and fully operational?

To include stowage barriers and associated hydraulic power systems; cranes; Dredging system (Cutter head, bucket or drag head/arm) and associated power supplies.

8.21.8 Does the vessel/unit have a crew competence/training matrix that addresses dredging operations?

Spot check training, experience and certification records carried by personnel/crew.

8.21.9 Does the vessel/unit have a competence matrix that addresses maintenance activities associated with the dredging handling equipment?

Spot check training, experience and certification records carried by personnel/crew.

8.21.10 Does the vessel/unit have onboard a copy of the Class Approved Cargo Operations Manual?
A Class approved Cargo Operation Manuals containing guidance for the safe operation of the vessel for both normal and emergency conditions should be provided.

8.21.11 Do the emergency procedures cover additional risks associated with the vessel's operations?
e.g. loss of stability/watertight integrity, loss of moorings/station keeping, discharge equipment failure or malfunction, severe weather, hydrodynamic events, recovery of injection system, recovery of cutter head or bucket, fluidization system, recovery of drag head system, degassing of spoils, dumping of spoils. Procedures to be available onboard, evidence that personnel are familiar with them.

8.21.12 For Trailing Suction Hopper dredgers is the stress and stability information included with the plan for current operations; have stability and stress calculations been performed for the current operation and do the dredging/ballast officers understand?
Inspectors should determine that prior to transfer of cargo, calculations have been made for stress and stability conditions for the start, interim and completion of transfer conditions. Regular monitoring of stress and stability should be taking place throughout cargo transfer to ensure that the conditions have been maintained within design limits.

8.21.13 Is there an inclinometer located near the dredging and/or ballast control panel?

8.21.14 For Trailing Suction Hopper dredge are remote reading draft gauges operating correctly?
Procedure for calibration and cross reference to visual and loading computer values.

8.21.15 Is there a system of verifying and recording the water injection rate (If applicable), discharge rate (i.e., Cutter suction dredge) or the quantity of dredge spoils in the hoppers at any given time?
This should be aligned with ballast information to ensure that the vessel's stability can be readily verified in case of equipment malfunction.

8.21.16 Is the dredging and/or ballast control position attended continuously when dredge operations are underway?
Dredging and/or Ballast station to be manned continuously to ensure prompt action can be taken when required.

8.21.17 Do Dredging (Spoil discharge or hopper) and/or ballast system valves fail to the closed position in the event of power failure?
To prevent migration of ballast and/or spoils that could occur if valves creep open.

8.21.18 Can Dredging (Spoil discharge or hopper) and/or ballast system valves be operated in the event of power failure?
Via manual valves, stored pressure accumulators or hand power packs.

8.21.19 Is there a process for ensuring sea chest and any overboard valves are regularly inspected and kept free of leaks and debris?

8.21.20 Is there a means in place to track dredge equipment effectively when deployed?
State means.

8.21.21 Are remote shut downs of dredge pumps included in the Vessel PMS and are they operating correctly?
State when last tested.

8.21.22 Is the primary means for deploying the dredge equipment/drag head to the sea bed in good working order?

8.21.23 If applicable are all permits and licences onboard in order for the dredger to carry-out operations (i.e., spoils transport etc.)?

8.21.24 Is there a documented process for updating software packages that are integrated into the dredging system?

8.21.25 If applicable, is the vessels fluidization of spoils equipment fully operational and in good order?
State what method they use i.e. water injection.

8.21.26 Are there documented procedures and general safety arrangements in place for personnel during dredging operations?

8.21.27 Is there a policy/procedure in place for pump room access?

8.21.28 Are effective procedures in place addressing the safety of High Pressure operations?

8.21.29 If applicable, are watertight securing arrangements fitted for the hoppers?

8.21.30 If applicable, are suitable measures in place on board the vessel to mitigate the overflow of hoppers?
e.g., free ports.

8.21.31 In the event of main lifting gear failure does the vessel/unit carry spare lifting gear to recover the dredge equipment and return it to service?

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

Ship Assist Escort Tug

8.23.1 Does the vessel Operator have an adequate replacement policy with valid certificates for the towing line(s) in use?
Replacement policy should be based on Manufacturer's recommendation and periodic onboard line inspections. Independent third party testing results should be used to verify the length of service time.

8.23.2 If using HMPE, is the contact surface for the HMPE tow line clean and sufficiently smooth to avoid damage to tow line?
Contact surface should be clean and smooth with non-abrasive fittings to avoid damage. Surface maintenance should be part of routine inspection program.

8.23.3 Is the vessel's fendering in good condition and suitable for ship assist work?
All chains and hardware used to secure the fenders should be in good condition and the fendering placed in such a way as to avoiding steel to steel contact when working alongside a vessel.

8.23.4 Does the Operator have good visibility of the work area from the vessel's control station?
Operator refers to the vessel master or deck officer who is on watch and handling the vessel.

8.23.5 If there are visibility limitations caused by physical vessel design, are there risk mitigations employed to address them such as radios and talk back devices and are they in good working order?
If visibility is limited are there means such as radios or deck talk-back boxes used to communicate with crew. Inspectors shall ask crew to operate all such devices and note what the visibility restrictions are and how they are addressed by vessel crew.

Inspectors should determine if the vessel has a folding mast and if precautions are being taken to avoid the mast making contact while working alongside a vessel.

8.23.6 Does the operator have a procedure in place covering the use of recessed bitts?
A recessed bit is defined as a bitt inset into the ship's hull above the water line used to connect the tow line. Inspectors should look for a formal procedure that covers working with recessed hull bitts. These bitts usually have reduced SWL that the vessel operator should be aware of. Additionally, they require extra caution for the tug crew when connecting the vessel's line to.

8.23.7 If the vessel has a STAPLE, is the SWL for the staple and the angles of operability known to the vessel master and deck officers?
Inspectors shall list the SWL of the Staple. Staple may also be referred to as the fwd towing staple or towing fair lead.

8.23.8 Are the calculated indirect towing forces available to the Master and deck officers?
Indirect towing is a method used by tug to exert dynamic forces on the tow line substantially beyond its static bollard pull; e.g. using a tug's weight, bulk and underwater surface area or by turning obliquely to a tow line to produce additional forces to stop or turn a ship under way.

8.23.9 Are any operational limitations for towing arrangements (both fwd and aft) available and known to the master and officers?
Inspector to verify that all crew are aware of any limitations when utilising forward and aft towing arrangements

8.23.10 If fitted are the tension monitors calibrated and in good working order?
Inspectors shall sight and record the date of last calibration. Calibration may be a full calibration done during a bollard pull test or, in the case of older models, may be done by setting the tension monitor to zero when the there is no tension on the winch.

8.23.11 Is there a document readily available that clearly states vessel stability criteria and limitations and is there evidence to suggest master is familiar with the document?
Interview Master on the topic and identify what document is referred to.

8.23.12 Are the vessel's winch(s) in good working order? List the type, bollard pull and any outstanding deficiencies.
Inspectors shall visibly inspect each winch. Mounting brackets should be in good condition with no obvious cracks or defects. Hydraulic and air hoses shall have all fittings tights and no leaks present. Winch controls should be in good working order with minimal wastage. If a hook is used in lieu of a winch describe details. Winches are to be lubricated per vessel's preventative maintenance schedule.

8.23.13 Is the ship assist winch fitted with an emergency release system and is it regularly tested?
Inspectors shall visibly inspect each emergency release system. Provide details of the last test.

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

Security Escort Vessel

8.24.1 Is the vessel operating within the coastal state's laws and regulations? Does the vessel have documentation showing that it has been registered and approved for security use and covered by a MOU between the Coastal State and Company.
Letter of Authority from coastal state to provide security services and embark armed guards should be available. Some coastal states set a minimum criteria for a Security Escort Vessel (SEV) and a Certificate of Clearance will be issued prior to deployment as a security vessel.

8.24.2 Has flag state approval been sought for the embarkation of security personnel onboard the vessel?
Letter of Authority from Flag State. Check Private Maritime Security Company (PMSC standard operating procedures and records). If the vessel is not under any security service contract then N/A is applicable with a comment.

8.24.3 Is the vessel capable of performing security tasks?
Is the vessel maintained to its operating specification and does this specification make it suitable for security tasks?

Does the vessel have documentation of the operational capabilities required to conduct security tasks. Specify the maximum speed and endurance of the vessel.

8.24.4 Is the vessel hardened or ballistically protected specifically for security duties?
Is a Vessel Hardening Plan (VHP) available or ships records to indicate additional protection. If necessary (e.g.: fixed weapon mounts) has this been approved by Class?

8.24.5 Have additional HSSE factors been accounted for when Host Nation Forces or Privately Contracted Security staff join the vessel?
Check the vessels standard operating procedures and safety equipment records. Is safety equipment and PPE (Overalls, Hard Hats, Ear & Eye Protection) issued.

8.24.6 Have the Rules on the use of Force (RUF)/Rules of Engagement (ROE) been documented, discussed with the Master and made available to armed security personnel?
Check Vessel and PMSC standard operating procedures and records. If the armed security personnel are from a coastal state (e.g.: navy) have national rules of engagement been issued. If the inspector establishes RUF/ROE exist but cannot be disclosed, then N/A is applicable with the comment the RUF/ROE cannot be disclosed.

8.24.7 Is there documented evidence to show how the crew are made aware of their boundaries and jurisdiction in relation to the coastal state's requirements?
Check PMSC standard operating procedures and records. Employing companies may have a requirement to track vessels employed on security duties.

Does the vessel have an active AIS policy and is the master cognisant of laws & regulations of coastal states.

8.24.8 Does the vessel have an Emergency Response Plan to cover security related incidents?
Best Management Practise (BMP), PMSC standard operating procedures and records.

8.24.9 Does the vessel have an Emergency Response Plan to cover non security related incidents or contingencies in the event of a breakdown?
Check PMSC standard operating procedures and records i.e.: are extra lookouts provided in high-risk areas (see BMP West Africa Section 5 Page 16).

8.24.10 Are up to date records including any operating licenses kept on all security related equipment and ancillaries (e.g. weapon mounts, ballistic helmets, body armour, night vision goggles)?
Check PMSC standard operating procedures and records.

8.24.11 Does the vessel have documented records of its maintenance and servicing schedules?
If the question has been covered in the OVIQ then N/A with a comment is applicable.

8.24.12 Does the vessel have records available documenting the training and seafaring competency of its crew?
Check crew records, how often do they changeover / get refresher training. If the question has been covered in the OVIQ then N/A with a comment is applicable.

Mooring

General

9.1.1 Are the ropes, wires and equipment in good order and are there records of the inspection and maintenance available?

Certificates for ropes, wires and records of inspections and maintenance should be available. A Condition based retirement requirement should be in place

Mooring procedures

9.2.1 Are mooring lines secured to bitts turned up correctly?

If double bitts are available, the recommended method of turning up a rope on bitts is to take one or two full turns around the leading post before figure of eighting.

Note: Mooring lines must not be secured to winch warping drums.

9.2.2 Are all mooring lines stowed neatly to minimise tripping hazards and are mooring areas clear and unobstructed?

9.2.3 Is the general condition of fixed and temporary fenders on hull satisfactory with no metal protrusion on the ship side?

Fender securing arrangements such as pad eyes, chains etc. should be visually checked without compromising personal safety of the Inspector

Equipment

9.3.1 If fitted, are all mooring winches in good order?

Winches fully operable, covered by planned maintenance system. Winch guards to be in place. Check that winch foundations are in a satisfactory condition and that brake linings, drums and pins appear to be in good order. There should be a policy in place for the testing of winch brakes and results recorded. Record as an observation if last test date is not available.

9.3.2 Are all bollards, fairleads and chocks maintained in good order, free of grooving and marked with SWL?

9.3.3 Does the vessel have an anchor and is there sufficient anchor cable for the proposed area of operation?

Additional Comments

9.99 Additional Comments

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Communications

General

10.1.1 Can crew demonstrate a satisfactory understanding of how to operate communications equipment in an emergency?

10.1.2 Is a continuous listening watch maintained on VHF channel 16?

Equipment

10.2.1 Is the communications equipment in good order?
Where available, the minimum requirements for radio equipment for the vessel/unit should be taken from the Radio Certificate and its attachment Form R or in Form C if the Safety Radio Certificate is combined in the Harmonised Certificate. Local authority certification must be used as reference in case above is not applicable or available

10.2.2 Is the vessel/unit equipped with sufficient portable radios for use?
Sufficient portable radios should be available to allow effective communications during operations.

10.2.3 If applicable, are there documented procedures for the use of communications equipment within 500 m/ safety zones?
Check that intrinsically safe portable radios are available for operations inside a 500 m zone of production installations and rigs while engaged in drilling operations.

Additional Comments

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

Propulsion, power generation and machinery

Policies, procedures and documentation

11.1.1 Is the vessel/unit provided with operator's instructions, documented procedures and operating manuals for machinery onboard?
Machinery procedures should include at least the following:

- *guidelines on engine room operations;*
- *manufacture documentation;*
- *procedures to restart critical equipment*
- *reporting equipment deficiencies;*
- *engine room emergency preparedness*
- *planned maintenance and control of critical spare parts.;*
- *bunker transfer procedures.*

11.1.2 If applicable, is the engine logbook maintained up to date?
In compliance with Flag State requirements. The inspector may accept logs in either written or electronic format where flag state permits electronic recording. Hand written logbooks must be entered in ink.

Planned maintenance

11.3.1 Is a planned maintenance system in place, being followed and is it up to date?
Inspectors must ascertain that a PMS (computer or paper based) is in place and that it is accurate and maintained up to date. As minimum the PMS should contain the following:

- *list of equipment;*
- *details of maintenance schedule and history;*
- *inventory of critical spares.*

11.3.2 Is an up to date inventory of critical spare parts being maintained?
Critical spare parts should be outcome of formal risk assessment and inventory should include both operational and safety critical spares

Safety management

11.4.1 Are emergency escape routes, where applicable, clearly marked, unobstructed and lit?

11.4.2 Is the level of lighting in the machinery spaces satisfactory?
Also ensure all lights in the engine compartment and machinery spaces are covered.

11.4.3 Is the engine exhaust in good condition and where applicable, fitted with spark arrestors?
Engine Exhausts may not be fitted with Spark Arrestors for In-Shore Support Vessels not engaged in carrying flammable goods or not entering within 500m of Hazardous facilities.

11.4.4 Do records indicate the regular testing of emergency equipment?
Emergency equipment will include, where fitted, the following:

- *emergency air compressor,*
- *emergency generator,*
- *emergency steering,*
- *quick closing valves,*
- *emergency stops,*
- *engineers alarms*
- *bilge pumping equipment*
- *Emergency fire pump*

11.4.5 Are machinery emergency stops and shut offs clearly marked and do records indicate that they have been regularly tested?

Emergency stops include ventilation fans, fuel pumps and the quick closing valves, as applicable. Check that emergency stops are adequately protected from inadvertent activation.

11.4.6 Are diesel engine exhausts and other hot surfaces in the vicinity of fuel, diesel, lubricating and hydraulic oil pipes protected against spray?
Lagging and insulation should be in good condition and free from oil. If there is evidence of oil leakage or oil soaked lagging this must be recorded as an Observation.

11.4.7 Are the main switchboard, alternators and other electrical equipment satisfactorily protected from water spray?
Electrical installations should be checked for satisfactory protection from water spray. Equipment should be reviewed for simple electrical installation safety (loose wires, proper door cover).

11.4.8 Are all items of moving machinery which may present a hazard provided with guards?
Grinders, air compressor belt drives, vent fans, lathe, drill press etc.

11.4.9 Is all loose gear in the machinery spaces, stores and steering compartment properly secured?

11.4.10 Are chemicals properly stowed and are Safety Data Sheets (SDS) available?
SDS should be readily available in hard copy format.

11.4.11 Are machinery spaces clean and free from obvious leaks and is the overall standard of housekeeping satisfactory?

11.4.12 Are bilges free of oil, rubbish and sediment and is pumping system operational?
Oily areas indicate a lack of maintenance and cleanliness. However, a small amount of oil in savealls should not be considered unsatisfactory.

11.4.13 If fitted, are bilge high level alarm systems operational, regularly tested and are records maintained?
Inspectors should consider requesting that this critical alarm be tested in their presence.

Machinery status

11.5.1 Are all items of main, auxiliary and emergency plant in good order and reported to be fully operational?
Items of machinery may include:

- *the main engine(s);*
- *auxiliary engines and generators;*
- *compressors and emergency air compressors;*
- *purifiers and fuel oil handling equipment;*
- *sewage plant;*
- *bilge pumping arrangements and oily water separators;*
- *general pipework,*
- *air conditioning machinery;*
- *ventilation fans and trunking;*
- *stern tube and thruster sealing arrangements;*
- *exhaust manifolds*

11.5.2 Where applicable, is the emergency generator fuel tank provided with sufficient fuel?
The generator should be capable of providing full load requirements for at least 18 hours. Corresponding marking should be available on the tank.

11.5.3 Where an emergency generator is not fitted, are engine room emergency batteries in good order and fully charged?
The emergency batteries must supply the designed power load for up to 18 hours. check battery test/inspection records.

Emergency steering

11.6.1 If applicable, is emergency steering system in good order, tested periodically and crews familiar with its operation?

The opportunity should be taken if possible to request that an officer demonstrates the operation of the emergency steering arrangement. Is there an operating procedure posted?

Additional Comments

11.99 Additional Comments

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General appearance and condition

Hull, superstructure and external weather decks

12.1.1 Is the general condition, visual appearance and cleanliness of the hull, superstructure and weather decks including non-slip surfaces in working areas satisfactory?
Check that hull is free of oil staining, extensive coating breakdown or excessive marine growth.

12.1.2 Where applicable, are hull markings clearly indicated and correctly placed?

12.1.3 Is the general condition of service pipework satisfactory and is it free from significant corrosion and pitting and soft patches or other temporary repairs?
The following pipework, should be examined, particularly on the underside, for external indications of corrosion and for patching:

- *hydraulic pipework;*
- *fire mains and associated fittings;*
- *compressed air lines;*
- *bulk cargo lines.*

Pipe securing arrangements should be intact and permit free movement of the pipes as necessary.

12.1.4 Are all deck openings (including watertight doors, weathertight doors and portholes), in a satisfactory condition and capable of being properly secured?
Are all watertight doors operating correctly, with seals in good condition?

Doors which are normally closed at sea, but are not provided with means of remote closure, should have notices fixed to both sides of the doors stating: "To be kept closed at sea". Doors which should be permanently closed at sea should have notices fixed to both sides stating: "Not to be opened at sea".

12.1.5 Are all the vent pipes for fuel tanks protected against flame ingress by a suitable gauze diaphragm and protected against water ingress by a goose neck or other efficient means?
Vent heads should be regularly inspected and flame screens, where fitted, checked for cleanliness. Closing device which prevents the ingress of water should be in good condition and operating correctly.

Electrical equipment

12.2.1 Is the level of lighting in accommodation spaces and working areas on main deck satisfactory?
The level of lighting should be adequate to allow for:

- *safe access to the various areas;*
- *the safe use of mooring equipment;*
- *monitoring of the deck area;*

12.2.2 Is the general condition of electrical equipment, including light fittings, conduits and wiring, satisfactory?

Accommodation Areas

12.4.1 Where applicable, are public spaces, including smoke rooms, common toilets, mess rooms, sanitary areas, storerooms, food handling spaces, refrigerated spaces, galleys and pantries clean and in a hygienic condition?
Unburned fuel or fatty deposits in galley ranges, within flue pipes and in the filters of galley extraction fans can cause fire and must be maintained in a clean condition. If fitted, oil and deep fat fryers should be equipped with thermostats to cut off the electrical power and prevent overheating.

Inspector to make observation if accommodation is not well ventilated and covered by air conditioning if appropriate.

Additional Comments

12.99 Additional Comments

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