INTERTANKO

Gap Analysis and Mapping of VIQ Version 7 vs VIQ Version 6 (Rev.1)

TWENTY 18

Gap Analysis and Mapping of VIQ7 vs VIQ6

Cover image: Nature at its best*, by Capt. Anastasios Kyrtsioudis – EuroNav*

V1 12/07/2018

Contents

Introduction

Since the launch of the seventh edition of the Vessel Inspection Questionnaires for Oil Tankers, Combination Carriers, Shuttle Tankers, Chemical Tankers and Gas Tankers, INTERTANKO has been developing a gap analysis and mapping document for use by the tanker industry.

OCIMF have stated that this edition has undergone an extensive revision process which has brought the VIQ up to date with respect to changes in legislation and best practices. OCIMF examined the questions in the existing edition of the VIQ (VIQ6) to determine whether these continue to remain relevant and has reduced the overall set of questions by up to 90 questions. Notably a new chapter (Chapter 7) has been developed to cover Maritime Security which has 21 new questions covering Policies and Procedures, Equipment and Cyber Security and the section on Mooring (Chapter 9) has been significantly reviewed to incorporate the revisions and best practices that will be introduced in the Mooring Equipment Guidelines, Fourth Edition (MEG4).

This seventh edition of the VIQ (VIQ7) is freely available to download by clicking or visiting the link below:

https://www.OCIMF-sire.org/docs/SIRE%20Vessel%20Inspection%20Questionnaire%20-VIQ%207.pdf

The gap analysis has been arranged so that new question text is highlighted in red. The gap column shows what the difference is between the old and new questions. A column highlights whether there is a crew competence requirement. The mapping column shows the origin of the question.

For any errors or omissions related to this document should be sent to marine@INTERTANKO.com

INTERTANKO is also updating its *Seafarers Guide to Vetting Inspections* and this will be released in the latter half of 2018.

Chapter 1. General Information

No	Question Text	Gap	Crew-Comp	Mapping
General Information				
1.1-	Name of the vessel	No gap		No change
1.2-	Vessel IMO Number	No gap		No change
1.3-	Date the inspection was completed	No gap		No change
1.4-	Was a full inspection of the vessel completed	If not completed, note the reasons why and areas not inspected		New
1.5-	Port of inspection	No gap		Previously 1.4
1.6-	Flag	No gap		Previously 1.5
1.7-	Deadweight	No gap		Previously 1.6
1.8-	Date the vessel was delivered	No gap		Previously 1.7
1.9-	Name of the OCIMF inspecting company	No gap		Previously 1.8
1.10-	Date and time the inspector boarded the vessel	No gap		Previously 1.9
1.11-	Date and time the inspector departed the vessel	Record reason for the night inspection or why inspector does not leave the vessel upon completion		Previously 1.10
1.12-	Time taken for inspection	Record reason for inspection conducted over two or more sessions		Previously 1.11
1.13-	Name of the inspector	No gap		Previously 1.12
1.14-	Is an up-to-date OCIMF Harmonised Vessel Particulars Questionnaire (HVPQ) maintained and is it readily available?	OCIMF HVPQ maintained and available in soft copy		New
1.15-	Vessel's operation at the time of the inspection	No gap		Previously 1.13
1.16-	Product(s) being handled	No gap		Previously 1.14
1.17-	Vessel type	No gap		Previously 1.15
1.18-	Hull type	No gap		Previously 1.16
1.19-	Name of the vessel's operator	No gap		Previously 1.17
1.20-	Date the current operator assumed responsibility for the vessel	Current operator		Previously 1.18
1.21-	Date of the last port State control inspection	No gap		Previously 1.19
1.22-	Port of the last Port State Control inspection	No gap		Previously 1.20
1.23-	Name of Classification society	No gap		Previously 1.21
1.24-	Date of expiry of the Class Certificate	No gap		Previously 1.22

1.24-	Date of departure from the last class-credited drydock/repair period or in water survey	No gap		Previously 1.24
1.26-	Does the vessel have a recent class Survey Status Report and are past Class Survey Records complete?	Class Survey Status Report and survey records not more than 15 days old		New

Chapter 2. Certification and Documentation

No	Question Text	Gap	Crew-Comp	Mapping
Certification				
2.1-	Are all the statutory certificates listed below, where applicable, valid and have the annual and intermediate surveys been carried out within the required range dates?	International Ballast Water Management Certificate		No change
2.2-	Is the vessel's P and I Club a member of the International Group?	No gap		No change
Safety Management and the Operators Procedures Manuals				
2.3-	Do the operator’s procedures manuals comply with ISM Code requirements?	No gap		No change
2.4-	Does the operator’s representative visit the vessel at least bi-annually?	No gap		No change
2.5-	Is a recent operator’s internal audit report available and is a close-out system in place for dealing with non-conformities?	Operator’s audits not to be recorded as Observations. Internal safety audits on board and ashore not extended more than three months. (ISM Code 12.1) and review record no more than the last two internal audits or nine months, under the current ship management operation.		No change
2.6-	Does the Master review the safety management system, report to the operator on any deficiencies and does the operator respond to the Master's review?	Review should contain evidence of positive/negative feedback		No change
Survey and Repair History				
2.7-	Is the vessel free of conditions of class or significant recommendations, memoranda or notations?	No gap		Previously 2.8
2.8-	Has the vessel been enrolled in a Classification Society Condition Assessment programme (CAP)?	No gap		Previously 2.12
2.9-	Are procedures in place to carry out regular inspections of cargo and ballast tanks, void spaces, trunks and cofferdams by the vessel’s personnel and are records maintained?	Inspection of tanks and spaces		Previously 7.7
Anti Pollution				

2.10-	Are the Engine Room (Part I) and Cargo (Part II) Oil Record Books (ORBs) correctly completed, free of any pollution incidents, violations and are slop/waste oil disposal certificates provided?	e-ORB oil record book logs verify accepted by flag states meeting the requirements of MEPC.1/Circ. 736/Rev. 2. Slop/waste oil disposal certificates provided. Reviewing records, go back no more than the last two internal audits or nine months.		Merger of 6.1 and 6.3
2.11-	If the disposal of engine room oily water or sludge to a cargo or slop tank has taken place, has the event been recorded in both Oil Record Books, was the receiving tank free of cargo and have the transfer arrangements been approved as per IOPP Form B?	Disposal of oily water or sludge to cargo tank or slop tank		New
2.12-	Is the vessel in possession of an approved Volatile Organic Compounds (VOC) Management Plan and are the Deck Officers aware of the general contents and requirements of the plan?	Deck Officers aware of the VOC Management Plan general contents and requirement	Y	Previously 6.11
2.13-	Is the vessel provided with an approved Ballast Water and Sediments Management Plan, are records maintained of all ballast water exchanges or treatment operations and are the Officers aware of BWM requirements?	Required to: • have an approved ballast water management plan on board, • maintain a ballast water record book, • manage their ballast water on every voyage • undertake an initial survey and be issued with an International Ballast Water Management Certificate Officers aware of the BWMP requirement.	Y	Previously 6.30
2.14-	Does the vessel have a Ship Energy Efficiency Management Plan (SEEMP) and are Officers aware of the general requirements relating to	SEEMP must be ship specific.	Y	Previously 6.41

	the plan?	Regulatory mechanisms are: · Energy Efficiency Design Index (EEDI), for new ships · Ship Energy Efficiency Management Plan (SEEMP), for all ships Officers aware of the SEEMP general requirement.		
Structure				
2.15-	Is the vessel free of any documentary or visual evidence to indicate any structural concerns?	Free of structural concerns. Oil tanker over five years of age shall have on board a complete file of survey reports. Inspection of the hull includes checking for any evidence of structural problems including collision contact or distortion from heavy weather. Vessels undertaking multiple hot work may indicate areas of recurring structural problems and verify reasons for the hot work repairs.		Previously 7.2
2.16-	If any cargo / ballast tanks, void or hold spaces were sighted from the deck, were they in good order, free from oil contamination and could the vessel easily check or sample segregated ballast prior to deballasting?	Sighting and sampling of tanks or spaces before discharge. It is not satisfactory if numerous bolts must be removed first from manhole covers to check that ballast is free of oil. If this is the only		Previously 7.6

		means of checking, an Observation must be made.		

Chapter 3. Crew Management

No	Question Text	Gap	Crew-Comp	Mapping
Crew Management				
3.1-	Does the manning level meet or exceed that required by the Minimum Safe Manning Document?	No gap		No change
3.2-	Are the STCW and flag Administration's regulations that control hours of work to minimise fatigue being followed and are all personnel maintaining hours of rest records in compliance with MLC or STCW requirements?	No gap		Merger of 3.2 and 3.3
3.3-	Are all personnel able to communicate effectively in a common language?	No gap		Previously 3.4
3.4-	Has the Master attended a ship handling course where applicable?	No gap		Previously 3.6
Crew Qualifications				
3.5-	Does the Officers' matrix posted for the vessel on the SIRE website accurately reflect the information relating to the Officers on board at the time of the inspection?	Data entry fields on the Officer's matrix has been adjusted to fully harmonise it with the CDI version		Previously 3.9
3.6-	Are those Officers who have immediate responsibility for cargo transfer, in possession of the Certificates of Specialized Training as applicable to the type of cargo being carried?	Persons with immediate responsibility may include pumpman and other ratings engaged in direct supervision of the cargo operation		Previously 3.10
3.7-	If the vessel is equipped with an Electronic Chart Display and Information System (ECDIS), have the Master and Deck Officers undertaken both generic training and type-specific familiarisation on the system fitted onboard?	Generic and type specific ECDIS training for Master and Deck Officers	Y	New
Drug and Alcohol Policy				
3.8-	Does the operator have measures in place to prevent Drug and Alcohol abuse in accordance with OCIMF guidance?	Onboard unannounced testing shall be less than the shortest contract period on board and initiated by the Company		Merger of 3.11 to 3.16

Chapter 4. Navigation and Communications

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
4.1-	Are the Deck Officers familiar with the Company navigation procedures and instructions and are the Company navigation procedures comprehensive?	The SMS identify levels of authority and lines of communication between the Master, ship's Officers, crew and the Company. (BPG 5th edition 1.3) Procedures for ECDIS should cover safety parameters (contours, depths and safety frame), primary means of navigation for the vessel, T&P Notices, navtex and navarea warning management, ENC management and correction process including safety measures to avoid viruses and contingency planning in the event of dual ECDIS failure. Deck Officers familiar with Company navigation procedure and instruction.	Y	No change
4.2-	Is the vessel maintaining an adequate record of all navigational activities, both at sea and during pilotage?	Software systems meeting requirements of IMO, Marpol, SOLAS and flag states may be an acceptable means of logbook entries		Previously 4.3
4.3-	Are procedures in place for the testing of bridge equipment before arrival / departure and check-lists in effective use for pre-arrival, pre-departure, watch handover and master-pilot exchange?	Administration may waive the requirements to carry out the full steering gear tests		Previously 4.7

		for ships which regularly engage on voyages of short duration. Master to pilot exchange include the pilotage plan and the circumstances when deviation from the plan may be required. Any amendments to the plan should be agreed, and any changes in individual Bridge Team responsibilities made, before pilotage commences; and ECDIS unit along with relevant alarm settings NP232 12.23		
4.4-	Are fire and safety rounds being completed after each watch, recorded in the deck log and are the staff conducting the rounds aware of their duties here?	Rounds of the vessel should be conducted at times when the majority of crew would be normally off duty sleeping. Rounds shall include a physical check to ensure that all loose equipment is secured, interior and exterior doors closed and there are no immediate fire or security risks to the vessel. Staff conducting fire and safety rounds aware of their duties and recorded in the deck log.	Y	Previously 4.6
4.5-	Are the Deck Officers familiar with the operator's Under Keel Clearance policy, able to demonstrate satisfactory UKC calculations for the last voyage and is the policy	Operator's policy relating to Under Keel Clearance should be included	Y	Previously 4.8

	comprehensive?	as part of the Master/Pilot exchange in the form of a written under keel calculation. Inspectors should take time to verify the UKC calculations have been correctly calculated for the critical stages of the route. Deck Officers familiar with UKC policy and demonstrate satisfactory UKC calculations.		
4.6-	Has the Bridge been adequately manned at all stages of the voyage and at anchor and were lookout arrangements adequate?	No gap		Previously 4.9
Navigation Equipment				
4.7-	Is navigation equipment appropriate for the size of the vessel and in good order?	Vessels constructed after 1st July 2002 - Bridge navigational watch alarm system (BNWAS)		Previously 4.10
4.8-	Are navigation lights in good order, is the OOW aware of the procedures for testing the lights and actions in event of failure?	OOW aware of the procedures for testing navigation lights and actions in event of failure	Y	Previously 4.11
4.9-	Are the Standard Magnetic and Gyro compasses in good order, is the OOW aware of the requirements for taking compass errors and is the compass error book maintained?	OOW aware of the requirements for taking compass errors and maintaining the records	Y	Merger of 4.13 and 4.16
4.10-	Was the hand steering in use for the vessel's transit from pilotage to the berth appropriate and are Deck Officers familiar with the changeover from hand steering to auto and vice versa?	Deck Officers familiar with the auto-hand steering changeover procedure and hand steering used during pilotage	Y	Previously 4.14
4.11-	Are the Deck Officers familiar with procedures to retain the VDR data in the event of an incident?	Deck Officer familiar with the VDR data retain procedures	Y	Previously 4.17

		and action taken to preserve the recorded VDR data within 12 hours of the start of an incident		
4.12-	Is there an effective Chart and Publication (Paper and Electronic) Management System in place and are the Deck Officers familiar with the process including the effective management of T and P notices?	Publications in electronic format may be accepted by certain flag Administrations and should be indicated where approved in lieu of paper publications on SEC Form E including backup arrangement. Deck Officers familiar with the process of effective Chart and Publication Management System.	Y	Previously 4.18
4.13-	Are Deck Officers aware of the requirements for managing Navtex and Navarea Warnings and is there evidence of an effective system in place to monitor these warnings?	Some ECDIS systems permit Navtex messages to be automatically input onto the ECDIS and displayed automatically. Inspectors should establish the procedure onboard each vessel to ensure relevant messages are captured on the ENCs as an overlay. Navigational Warnings on the web does not relieve Masters / Captains of the requirement to receive Navigational Warnings via IMO/IHO approved	Y	Previously 4.29

		broadcast systems. Deck Officers aware of the requirement for managing Navtex and Navarea Warnings.		
4.14-	Are Master and Deck Officers familiar with the operation of the ECDIS system fitted on board?	The ECDIS must be updated to the latest version of the IHO S-52 Presentation Library introduced in edition 4.0.		Previously 4.19
4.15-	Are Master and Deck Officers familiar with the safety parameter settings for the ECDIS and have the safety settings been correctly applied for the vessel's passage?	Safety parameters should be well understood, clearly defined within the Company SMS and correctly applied. The value of the safety contour should be calculated during the planning phase and entered by the OOW. The Safety Contour marks the division between "safe" and "unsafe" water. The Safety Depth highlights individual soundings in bold. Safety Frame or Safety Cone provide early indication of the vessel running into danger or approaching an area of concern. Set not too large to prevent alarm overload.	Y	Previously 4.21
4.16-	Were the charts used for the previous voyage appropriate?	No gap		Previously 4.20
4.17-	Are Master and Deck Officers aware of the requirements of Electronic Chart Display and Information System (ECDIS) and does the system fitted meet SOLAS and flag state requirements?	ECDIS should store and be able to reproduce elements to reconstruct the navigation and	Y	Previously 4.22

		official database during previous 12 hours. ECDIS should be connected to system providing continuous positing fixing. Master and Deck Officers aware of the SOLAS and flag state requirements of ECDIS		
4.18-	Has the vessel been safely navigated in compliance with international regulations and are Deck Officers familiar with these requirements?	Deck Officers familiar with international regulations	Y	Previously 4.23
4.19-	Are Master and Deck Officers aware of the requirements for the echo sounder and is there evidence that it has been in use as appropriate during the voyage?	Echo sounder if fitted with a shallow water alarm, should be set to an appropriate safe depth to warn of approaching shallow water. Master and Deck Officers aware of the echo sounder requirement.	Y	Previously 4.24
4.20-	Was a comprehensive berth to berth passage plan available for the previous voyage and were the Deck Officers aware of position fixing requirements including the use of parallel indexing both at sea and during pilotage?	Berth to berth passage plan available and Deck Officers aware of parallel indexing for position fixing	Y	Merger of 4.25 and 4.26
Communications				
4.21-	Are Deck Officers familiar with the preparation and transmission of distress and urgency messages on the GMDSS equipment, are instructions clearly displayed and is equipment in good order?	OOW should be familiar with the procedures for sending distress, urgency and safety messages. Uses of EX rated mobile phones within the gas-hazardous area confirm that proper certification is provided.	Y	Merger of 10.1 and 10.3

4.22-	Are Officers aware of the function of the ship security alert system and how it operates?	No gap		Previously 10.4
4.23-	Are the Officers aware of the periodical test requirements for GMDSS equipment and is the radio logbook correctly maintained with entries of such tests?	The requirements relating to the retention of radio logs are determined by the flag State and the ITU Radio Regulations and should be included in the SMS. Officers aware of the periodical test of GMDSS equipment and radio logbook entries.	Y	Merger of 10.6 and 10.7
4.24-	Is there a maintenance programme in place to ensure availability of the radio equipment?	No gap		Previously 10.9
4.25-	Is the satellite EPIRB fitted, armed, labelled correctly and inspected in accordance with the manufacturer's requirements?	No gap		Previously 10.11
4.26-	Is the vessel equipped with sufficient intrinsically safe portable radios for use on deck?	No gap		Previously 10.14
4.27-	Are survival craft portable VHF radios and Search and Rescue Locating Devices in good order and charged?	Primary battery shelf life must be at least two years and highly visible yellow/orange colour. There is no requirement for the two-way VHF radios to be Ex rated or intrinsically safe type. Radios installed on or after 1st July 2005 comply with revised performance standards (Res MSC.149(77))		Previously 10.15

Chapter 5. Safety Management

No	Question Text	Gap	Crew-Comp	Mapping
Safety Management				
5.1-	Are Officers familiar with the process for conducting Risk Assessments for routine and non-routine tasks, do operators provide adequate procedures for conducting RA and is there sufficient evidence of this process undertaken?	Task Based Risk Assessment: First, vessel-specific generic TBRAs that can be used for all routine and low-risk tasks. Second, specific high-risk jobs that are not routine, such as working aloft or enclosed space entry. Officers familiar with the Risk Assessment process.	Y	New
5.2-	Is there evidence of a permit to work system in place for hazardous activities, are the crew aware of these requirements and is there documented evidence of compliance?	Company SMS for individual ships to determine when permit to work systems should be used. Crew aware of the permit to work system and documented evidence of compliance.	Y	New
5.3-	Is the appointed Safety Officer suitably trained, aware of their responsibilities and is there evidence to show that the Safety Officer has been effectively performing duties associated with this role?	Safety Officer attends suitable Safety Officer training course and aware of their responsibilities	Y	Previously 5.1
5.4-	Are the ship's Officers able to demonstrate their familiarisation with the operation of fixed and portable firefighting, lifesaving and other emergency equipment?	Officers able to demonstrate familiarisation with the operation of emergency equipment	Y	Previously 5.2
5.5-	Are the crew aware of the requirements for wearing personal protective equipment such as boiler suits, safety footwear, eye and ear protection, safety harnesses, respiratory and chemical protective equipment?	SMS provide a matrix of PPE requirements and posted in various public areas. Crew aware of the requirements for	Y	Previously 5.3

		wearing PPE which include respiratory and chemical protective equipment.		
5.6-	Is all electronic equipment in use in gas hazardous areas intrinsically safe?	Electronic equipment must be intrinsically safe. The use of smart watches / fitness bands is prohibited for use in gas hazardous areas. If, during the course of the inspection, inspectors observe a member of the Ship's staff using a smart watch / fitness band, then an observation is to be recorded.		New
5.7-	Are crew members participating in safety meetings and is there evidence of effective discussions on safety-related issues with shore management feedback?	The committee must be chaired by the Master, and include the Safety Officer. A meeting should also be held after any serious incident or accident. Crew members participate in safety meeting for effective discussions.	Y	Previously 5.5
5.8-	Are the crew aware of the requirements for reporting of accidents, incidents, non-conformities and near misses and is there an effective system of reporting and follow-up investigation in place?	Evidence of near miss reports generated by all ranks. Crew aware of the requirement and have effective reporting and follow-up investigation.	Y	Previously 5.6
5.9-	Are the Officers and ratings aware of the requirements of the ISGOTT Ship/Shore Safety Check List (SSSCL) and are the provisions of the check list being complied with?	Vessel not penalised with observation if the shore representatives have not periodically signed the rechecks. Smoking can only be permitted in	Y	Previously 5.7

		designated smoking place. Officers and ratings aware of the SSSCL requirement and checklist.		
5.10-	Are the crew aware of the requirements to keep external doors, ports and windows closed in port and is the accommodation space atmosphere maintained at a slightly higher pressure than that of the ambient air?	Crew aware of the accommodation space positive pressure requirement. Due consideration should be taken to ensure that the pressure differential is not so great as to ensure self- closing doors operate effectively.	Y	Merger of 5.9 and 5.10
5.11-	Is all loose gear on deck, machinery rooms, stores and in internal spaces properly secured?	The top of the drum should be covered		No change
Drills, Training and Familiarisation				
5.12-	Are the crew familiar with the location and operation of fire and safety equipment and have familiarisations been effectively completed for all staff?	Crew familiar with the location and operation of fire and safety equipment. All the ship's life-saving and fire-extinguishing appliances shall be covered within any period of two months.	Y	No change
5.13-	Are the crew familiar with their duties in the event of an emergency and are emergency drills being carried out as required?	Crew familiar with their emergency duties. Regular drills should test the feasibility of the ship’s rescue plan under different and difficult circumstances. IGF Code vessels designed to receive and use gas as a bunker fuel, gas-related drills and emergency exercises conducted.	Y	No change

5.14-	Are the crew familiar with their duties during lifeboat and fire drills and are drills being performed effectively and on a frequency meeting SOLAS and flag state requirements?	Crew familiar with their duties and drills performed effectively and on a frequency as required. Feedback from drills shall be captured to verify the effectiveness of onboard training.	Y	No change
5.15-	Is there evidence of regular training in the use of life-saving equipment undertaken and are crew familiar with those requirements and the location / contents of the training manuals?	Crew familiar with LSA requirement and training manual location / contents, including the plans, procedures and equipment for recovery of persons from the water.	Y	No change
Enclosed Space and Pump Room Entry Procedures				
5.16-	Are the Officers aware of the industry requirements for enclosed space entry and have these been correctly followed?	Officer aware of the industry requirement. A list should be produced on a ship-by-ship basis to identify enclosed spaces. For safe entry, there shall be not more than 50% of the occupational exposure limit (OEL) of any toxic vapours and gases.	Y	Previously 5.20
5.17-	Are the crew aware of safe entry procedures into the pump room, compressor rooms and trunk spaces as applicable and are safe entry procedures being followed?	Crew aware of safe entry procedure for compressor rooms and trunk spaces. Electric motor rooms, cargo compressor and pump-rooms, spaces containing cargo-handling equipment and other enclosed spaces where cargo vapours may accumulate shall be fitted with fixed artificial ventilation systems capable of being controlled from	Y	Previously 5.21

		outside such spaces.		
5.18-	Are pump room, compressor rooms and trunk spaces (as applicable) adequately ventilated?	The ventilation system for electric motor rooms, cargo compressor and pump-rooms, spaces containing cargo-handling equipment shall have a capacity of not less than 30 changes of air per hour, based upon the total volume of the space. As an exception, non-hazardous cargo control rooms may have eight changes of air per hour.		Previously 5.22
5.19-	Are the Officers aware of the correct settings of pump room fire and flooding dampers and are the dampers clearly marked and in good order?	Officers aware of the correct setting	Y	Previously 5.23
5.20-	Are the crew aware of the permanent arrangements provided for lifting an incapacitated person from the cargo and, if applicable, the ballast pumproom, including provision of a suitable stretcher or harness and is the equipment in good order?	Crew aware of the lifting arrangement. A pumproom may either be a Cargo pumproom, Ballast pumproom, or Fuel oil transfer Pumproom.	Y	Previously 5.24
Monitoring Non-Cargo Spaces				
5.21-	Are spaces adjacent to cargo tanks, including pipe ducts, regularly monitored for accumulations of gas with an operable fixed and/or portable measuring equipment?	Oil tankers of 20,000 tonnes deadweight and above, constructed on or after 1 January 2012, shall be provided with a fixed hydrocarbon gas detection system. In the event of failure, manual checks must be made and records maintained. Manufacturers' instructions for the maintenance followed.		Previously 5.25

5.22-	Where a fixed system to monitor flammable atmospheres in non-cargo spaces is fitted, are recorders and alarms in order?	No gap		Previously 5.26
Gas Analysing Equipment				
5.23-	Does the vessel have appropriate duplicate portable gas detection equipment suitable for the cargoes carried, are the Officers familiar with the operation, calibration and is the equipment being maintained in accordance with manufacturers and industry recommendations?	A procedure must require that all oxygen and hydrocarbon analysers are checked for correct operation before each use. Cargo and bunker fuels should not be treated as free of H2S (or benzene) until after they have been loaded and the absence of H2S has been confirmed. The use of personal H2S gas monitoring instruments by personnel engaged in cargo operations is strongly recommended. Two toxic gas detectors are required on vessels carrying noxious liquids and being maintained as per manufacturers' and industry recommendations.	Y	Merger of 5.27 and 5.28
Hot Work Procedures				
5.24-	Are Officers aware of the requirements for hot work and are hot work procedures in accordance with the recommendations of ISGOTT and OCIMF guidelines?	Crew aware of the hot work requirement	Y	Previously 5.32
5.25-	Are Officers aware of safety guidelines for electric welding equipment, are written guidelines posted and is equipment in good order?	Officers aware of safety guidelines for electrical welding and it is posted	Y	Previously 5.33
5.26-	Is gas welding and burning equipment in good order and spare oxygen and acetylene cylinders stored apart in a well-ventilated location outside of the accommodation and engine room?	Pipe joints on the low-pressure side of the regulators shall be welded.		Merger of 5.34 and 5.35

		Regulators should be inspected annually and replaced or refurbished on a five-year basis. The use of propane in gas burning and welding systems is prohibited.		
Life Saving Equipment				
5.27-	Are the Officers aware of the requirements of LSA, are there ship-specific life-saving equipment maintenance instructions available and are weekly and monthly inspections being carried out?	Officers aware of the LSA requirement	Y	Previously 5.37
5.28-	Are the Officers aware of the maintenance requirements for lifeboat, liferaft, rescue boat release hooks and free-fall lifeboat release systems, where fitted and, are lifeboats, rescue boat and liferafts including associated equipment well-maintained ready for use?	Officers aware of the requirement for lifeboats, rescue boat and liferafts maintenance and equipment well maintained ready for use. On-load release and retrieval systems must comply with MSC.1/Circ.1206/Rev.1 Annex 1 no later than July 1, 2019.	Y	Merger of 5.39, 5.43 and 5.44
5.29-	Are lifeboats, including their equipment and launching mechanisms, in good order and have they been launched and manoeuvred in the water in accordance with SOLAS requirements?	No gap		Merger of 5.40 and 5.41
5.30-	Is the rescue boat, including its equipment and launching arrangement, in good order and are Officers familiar with the launch procedures?	Each propeller on a lifeboat must be fitted with a propeller guard with a maximum opening of 76 mm. Officers familiar with the rescue boat launching procedures.	Y	Previously 5.42
5.31-	Are lifebuoys, associated equipment and pyrotechnics in good order, clearly marked and are there clear procedures in place to ensure that only intrinsically safe lights are located in the gas hazardous areas?	Lifebuoy self-igniting lights do not need to be intrinsically safe if located outside of the gas hazardous area. Self-contained RLTA		Merger of 5.45 and 5.48

		checked ready for immediate use. Equipment clearly marked in accordance with IMO Res. A.760(18) and clear procedures in place to ensure that only intrinsically safe lights are located in the gas hazardous areas.		
5.32-	Are lifejackets in good order and correctly located?	The lifejacket requirements comply with LSA Code II/2.2. Lifejackets clearly located.		Previously 5.46
5.33-	Are immersion suits in a good order and correctly positioned and are Officers aware of maintenance and carriage requirements?	Officers aware of the immersion carriage, location and maintenance requirements. Each suit subjected to air pressure test at intervals not exceeding three years, or more frequently for suits over ten years of age, by a suitable shore-based facility equipped to make any necessary repairs. The air pressure test may be carried out on board ship if suitable equipment is available.	Y	Previously 5.47
Fire Fighting Equipment				
5.34-	Are ship-specific fire training manuals and safety operational booklets available and are the crew aware of the general contents and location of the manuals?	Crew aware of the general contents and location of the fire training and safety operational manuals	Y	Merger of 5.50 and 5.51
5.35-	Are the crew aware of the fixed firefighting equipment fitted, are ship specific firefighting equipment maintenance instructions available and is maintenance being carried out?	Crew aware of the fixed firefighting equipment fitted. When inspecting the CO2 systems, the inspector should determine from the Officer accompanying	Y	Previously 5.52

		whether the pins should be 'in' or 'out' for the system to be ready for immediate use.		
5.36-	Are records available to show that samples of foam compound have been tested at regular intervals?	No gap		Previously 5.53
5.37-	Are the crew aware of the location and use of the International Shore Connection, is it readily available externally, is a fire control plan exhibited within the accommodation, also a copy available externally and equipment correctly marked on the plan?	Crew aware of the location and use of International Shore Connection	Y	Merger of 5.54 and 5.57
5.38-	Are fire mains, pumps, hoses, nozzles and isolating valves in good order, available for immediate use and clearly marked?	Inspectors should request the accompanying crew member to randomly check the isolating valves to ensure they are freely operative.		Merger of 5.55 and 5.56
5.39-	Are Officers aware of the requirements for testing fixed fire detection and alarm systems and are the systems in good order and tested regularly?	Officers aware of the requirements for testing fixed fire detection and alarm systems. Manufacturer's instructions should be consulted for testing of fire detection heads which may require specific test equipment.	Y	Previously 5.58
5.40-	Are the crew familiar with the fixed fire extinguishing systems, where fitted, are they in good order and are clear operating instructions posted?	The crew familiar with the fixed fire extinguishing systems	Y	Previously 5.59
5.41-	Is the emergency fire pump in full operational condition, starting instructions clearly displayed and are Officers able to operate the pump?	Officers able to operate the emergency fire pump	Y	Previously 5.60
5.42-	Are portable fire extinguishers in good order with operating instructions clearly marked and are crew members familiar with their operation?	Crew members familiar with the operation of portable fire extinguishers	Y	Previously 5.61
5.43-	Are crew members familiar with donning breathing apparatus and are fireman's outfits in good order and ready for immediate use?	Crew members familiar with donning breathing apparatus and fireman's outfit. BA sets fitted with an	Y	Previously 5.62

		audible alarm and a visual or other device which will alert the user. Two two-way portable radiotelephone apparatus for each fire party of an explosion-proof type or intrinsically safe. Firemen's outfits complying with SOLAS: - 5,000 m3 and below: 4 outfits; - Above 5,000 m3: 5 outfits. (IGC 11.6.1) Within the period of three years from the date of the last hydraulic pressure test every composite cylinder shall be examined for defects externally and internally.		
5.44-	Are crew members familiar with the donning of Emergency Escape Breathing Devices (EEBDs) located in the accommodation, engine room and pump room (as applicable) and are they in good order and ready for immediate use?	Crew members familiar with the donning of EEBD's. Provision of additional EEBDs at work stations on the maindeck when carrying toxic cargoes.	Y	Previously 5.63
5.45-	Are fire flaps clearly marked to indicate the spaces they serve and is there evidence of regular testing and maintenance?	Inspectors should request the crew to demonstrate the operation of fire flaps at random, but should not interfere with the vessel's operations.		Previously 5.65
Material Safety Data Sheets (MSDS)				
5.46-	Are Material Safety Data Sheets (MSDS) on board for all the cargo, bunkers, chemicals, paints and other products being handled, and are all Officers familiar with their use?	All Officers familiar with MSDS inclusive for chemicals and paints	Y	Previously 5.66
Access				

5.47-	Is the vessel provided with a safe means of access and are all available means of access (gangway / accommodation ladder / pilot ladder / transfer basket) in good order and well maintained?	At every five-yearly survey, the accommodation ladder, gangway and winch should be operationally tested with the specified maximum operational load of the ladder. (MSC.1/Circ.1331) A lifebuoy equipped with a self-igniting light and a buoyant lifeline should be available for immediate use in the vicinity. Pilot ladders should be certified by the manufacturer as being constructed to comply with the requirements of IMO Resolution A.1045(27) or ISO 799:2004. All wires used to support the means of embarkation and disembarkation shall be maintained as specified in regulation III/20.4 and renewed when necessary or at intervals of not more than five years, whichever is the earlier.		Merger of 5.67, 5.68, 5.69 and 5.70
Sample Arrangements				
5.48-	Is there a suitable means for storing of cargo and bunker samples, is a cargo and bunker sample locker situated within the main cargo area and is it in good order?	Cargo and bunker samples and lockers. Company should have a policy that addresses the disposal of samples. Cargo samples are retained for a period		New

		of three months after the cargo has been discharged. Bunker samples retained until the fuel oil is consumed, and not less than 12 months from the time of delivery.		

Chapter 6. Pollution Prevention

No	Question Text	Gap	Crew-Comp	Mapping
Pollution Prevention				
6.1-	Are the ship's crew familiar with their duties in relation to the Shipboard Oil Pollution Emergency Plan (SOPEP) / Shipboard Marine Pollution Emergency Plan (SMPEP), is the plan maintained updated with emergency contacts readily available?	Deck department familiar with their duties as per SOPEP/SMPEP and the plan maintained and updated with emergency contacts readily available	Y	Merger of 6.6 and 6.8
6.2-	Is the ship fitted with a main deck boundary coaming and scupper arrangement that is effectively plugged during operations?	Scupper arrangement effectively plugged during operations		Merger of 6.13 and 6.14
6.3-	Are means readily available for dealing with small oil or chemical spills?	Inclusive chemical spills		Previously 6.15
Cargo Operations and Deck Area Pollution Prevention				
6.4-	Are Annex 1 and 2 overboard valves and cargo system sea valves suitably secured, thoroughly checked closed prior to commencement of cargo transfer and where provided, sea valve-testing arrangements in order and regularly monitored for leakage?	No gap		Previously 6.17
6.5-	If ballast lines pass through cargo and/or Bunker tanks are they tested regularly, and the results recorded?	No gap		Previously 6.19
6.6-	Are adequate manifold spill containers and gratings in place under the cargo manifolds, fitted with suitable drainage arrangements and are they empty?	No gap		Previously 6.20
6.7-	Have bunker pipelines been satisfactorily tested on an annual basis and is there suitable evidence of this test?	Bunker pipelines satisfactorily tested and is there suitable evidence of this test. USCG continue to accept 33 CFR 156.107.		Previously 6.21
6.8-	Are unused cargo and bunker pipeline manifolds fully bolted and are all drains, vents and unused gauge stems, suitably blanked or capped?	No gap		Previously 6.22
6.9-	Is suitable spill containment fitted around all fuel, diesel and lubricating oil tank vents and hydraulic deck machinery?	Combining with hydraulic deck machinery - no gap		Merger of 6.23 and 6.24

6.10-	Are the arrangements for the disposal of oily water in the forecastle and other internal spaces adequate and are Officers aware of these requirements?	Bilge wells should be sighted to give early warning of leakage and conduct the bilge alarm tests where possible. Officers aware of the oily water disposal requirements	Y	Previously 6.25
Pump Rooms and Oil Discharge Monitors				
6.11-	Are pump room / trunk space bilge high level alarms fitted, regularly tested and the results recorded?	Witness the bilge alarm tests where possible.		Previously 6.26
6.12-	Are adequate arrangements provided for pipeline draining and the disposal of pump room bilge accumulations?	Adequate means to transfer bilge contents to cargo/slop tanks or other containment tanks.		Previously 6.27
6.13-	If an ODME is fitted, is it in good order, well maintained and any operational downtime recorded in the ORB?	ODME well maintained. Record mitigation measures meantime of the failure.		Merger of 6.28 and 6.29
Engine and Steering Compartments				
6.14-	Are the engine room bilge oily water pumping and disposal arrangements in good order?	No gap		
6.15-	Are emergency bilge pumping arrangements ready for immediate use; is the emergency bilge suction clearly identified and, where fitted, is the emergency overboard discharge valve provided with a notice warning against accidental opening?	No gap		Previously 6.33
6.16-	Have disposals of sludge and other machinery waste been conducted in accordance with MARPOL requirements?	Verify no obvious signs of malpractice which include newly disturbed pipe flanges, flexible hose connections, broken seals, oily flanges/valve glands and piping that is not indicated on the approved bilge disposal system.		Merger of 6.2, 6.5, 6.34 and 6.38
6.17-	Is the oily water separator in good order, free from unauthorised modifications and are the engineers familiar with its operation and data recovery procedure where applicable?	The 15 ppm Bilge Alarm data recorded remains available on board for 18 months.	Y	Previously 6.35

		(MEPC.107(49) 4.2.9) The accuracy of the 15 ppm Bilge Alarms checked at IOPP Certificate renewal surveys. Engineers familiar with its operation and data recovery procedure.		
6.18-	Are specific warning notices posted to safeguard against the accidental opening of the overboard discharge valve from the oily water separator?	No gap		Previously 6.36
6.19-	If the oily water separator is not fitted with an automatic stopping device, do entries in the Oil Record Book Part 1 indicate that it has not been used in a Special Area?	No gap		Previously 6.37
6.20-	Is the vessel correctly segregating garbage and able to store garbage in a safe hygienic manner onboard and is the garbage being handled in accordance with the vessel's garbage management plan and is garbage record book being correctly maintained?	Correct segregation of garbage and stored in a safe hygienic manner onboard and correctly handled as per plan		Merger of 6.39 and 6.40
Ballast Water Management				
6.21-	If the vessel is provided with an approved Ballast Water Treatment System, is the system in good order, used where required and are Officers familiar with the safe operation of the same?	If vessel is provided with Treatment System, is the system in good order, used where required and are Officers familiar with the safe operation of the same	Y	New
6.22-	Where a Ballast Water Treatment Plant is fitted, is it maintained in accordance with manufacturers and vessels planned maintenance requirements?	Ballast Water Treatment Plant maintained as per manufacturers requirements		New

Chapter 7. Maritime Security

No	Question Text	Gap	Crew-Comp	Mapping
Policies and Procedures				
7.1-	Does the vessel have an approved Ship Security Plan?	Flag State approval letter or an endorsement stamp on the Ship Security Plan (SSP).		New
7.2-	Are Master and crew aware of the name and contact details of the Company Security Officer, and are these details posted?	Crew aware of the name of the CSO or where details are posted	Y	New
7.3-	Are ship security records related to port calls being maintained?	Inspectors do not need to review the details of the records but should note whether records are maintained or not.		Previously 5.16
7.4-	Are records of training and maintenance of equipment related to the ship security plan available?	Records related to training and maintenance of equipment maintained. Any security related equipment fitted on board should be periodically inspected and maintained.		Previously 5.17
7.5-	Has the ship's Security Officer been trained to undertake this role and do they understand their responsibilities?	Ship's Security Officer understands their responsibilities	Y	Previously 5.18
7.5-	Does the vessel have evidence to show staff are trained to undergo security duties?	Staff trained for security duties	Y	New
7.6-	If fitted, is the vessel's dedicated standalone security communications equipment regularly tested?	Inspector verify there are records of testing.		New
7.7-	Does the vessel have a routine to regularly test the ship security alert system?	Inspector verify of its existence.		New
7.8-	Does the Passage Plan include security-related information for each leg of the voyage?	Security-related information included in Passage Plan legs		New
7.9-	Does the vessel have a voyage/transit security risk assessment?	Voyage/transit security risk assessment reviewed and updated prior to entering a security		New

		risk area.		
7.10-	Does the vessel have procedures for vessel hardening?	Procedure for vessel hardening as per OCIMF information paper "Ship Security – Guidelines to Harden Vessels'. The ship should maintain records to demonstrate implementation.		New
7.11-	Does the Master/SSO have a clear understanding of the procedures for voluntary security reporting?	Master has clear understanding of voluntary security reporting requirements and evidence checked.	Y	New
7.12-	Is an adequate deck watch being maintained to prevent unauthorised access in port?	Prevent unauthorised access in port by continuous gangway watch and a routine for regular rounds of the deck. Remote monitoring of different areas such as CCTV should be noted in comments.		Previously 5.19
7.13-	Has the Company provided a list of security charts, publications and guidelines to the ship?	List of security charts, publications and guidelines		New
Cyber Security				
7.14-	Are Cyber Security Policy and Procedures part of the Safety Management System and is there a Cyber Response Plan onboard?	The procedures include a risk assessment of Cyber Security issues. Cyber Response plan contains guidance on 'symptoms' to look for, immediate actions to be taken and contact information for the Responsible Person.		New

		risk area.		
7.10-	Does the vessel have procedures for vessel hardening?	Procedure for vessel hardening as per OCIMF information paper “Ship Security – Guidelines to Harden Vessels’. The ship should maintain records to demonstrate implementation.		New
7.11-	Does the Master/SSO have a clear understanding of the procedures for voluntary security reporting?	Master has clear understanding of voluntary security reporting requirements and evidence checked.	Y	New
7.12-	Is an adequate deck watch being maintained to prevent unauthorised access in port?	Prevent unauthorised access in port by continuous gangway watch and a routine for regular rounds of the deck. Remote monitoring of different areas such as CCTV should be noted in comments.		Previously 5.19
7.13-	Has the Company provided a list of security charts, publications and guidelines to the ship?	List of security charts, publications and guidelines		New
Cyber Security				
7.14-	Are Cyber Security Policy and Procedures part of the Safety Management System and is there a Cyber Response Plan onboard?	The procedures include a risk assessment of Cyber Security issues. Cyber Response plan contains guidance on ‘symptoms’ to look for, immediate actions to be taken and contact information for the Responsible Person.		New

7.15-	Are the crew aware of the Company policy on the control of physical access to all shipboard IT/OT systems?	Crew aware of the policy to control physical access to shipboard IT systems. Procedures should include the control of access to all shipboard IT/OT terminals including access to servers which should be in a secure location. The procedures should also include access by any third-party contractors and technicians.	Y	New
7.16-	Does the Company have a policy or guidance on the use of personal devices onboard?	Company policy for personal devices checked for implementation		New
7.17-	Is Cyber Security awareness actively promoted by the Company and onboard?	Cyber Security awareness actively promoted to crew	Y	New

Chapter 8. Cargo and Ballast Systems – Petroleum

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
8.1	Are the Officers aware of the operator's policy statements, guidance and procedures, including information on maximum loading rates and venting capacities with regard to safe cargo operations?	Officers aware of the operator's policy statements, guidance and procedures	Y	No change
8.2	Are legible and up-to-date pipeline and/or mimic diagrams of cargo, inert gas and venting systems, as applicable, available in the pumproom(s) and cargo control area and are Deck Officers familiar with the systems?	Deck Officers familiar with the pipeline and/or mimic diagrams of cargo, inert gas and venting systems	Y	No change
8.3	Are cargo pump performance curves available, are Deck Officers aware of the test requirements for the cargo lines, vapour lines and inert gas lines in good order and is there recorded evidence of regular testing where applicable?	Deck Officers aware of the test requirements for the cargo lines, vapour lines and inert gas lines in good order and recorded evidence of regular testing. Pipelines should be visually examined and subjected to routine pressure tests to verify their condition. Other means of non-destructive testing or examination, such as ultrasonic wall thickness measurement, may be considered appropriate, but should always be supplemented by visual examination. 'Oil Transfer System' tested to 100% of their rated working pressure (MAWP) at least annually. And tested to 1.5 times their rated working pressure at least twice within any five-year period. The cargo discharge piping of all tank vessels shall be tested at least once each year for tightness, at the maximum working pressure.	Y	No change
Stability and Cargo Loading Limitations				
8.4	If a loading computer or programme is in use, is it class approved, regularly tested and are Officers aware of the test requirements including damage stability?	Ships constructed on or after 01 Jan 2016* and ships constructed before 01 Jan 2016* (by the first renewal survey on or after 01 Jan 2016, but before 01 Jan 2021**)	Y	Previously 8.5 and 8.6

		are required to be fitted with a stability instrument capable of handling both intact and damage stability. (* 01 Jul 2016 and ** 01 Jul 2021 for gas carriers) Officers aware of the test requirements including damage stability.		
8.5	Has a cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability and are any limitations, where applicable understood by the cargo watch officers and clearly documented?	Cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability as per ISGOTT Chapter 22. Every oil tanker of 5,000 tonnes deadweight or more shall have prompt access to computerised shore-based damage stability and residual structural strength calculation programs. The vessel should have an approved stability information book (SIB). Observation will be recorded if the condition not in accordance with the SIB.		Previously 8.7
8.6	Is the vessel free of inherent intact stability problems?	Important restrictions other than maximum permitted cargo density will be recorded as an observation. Verification of compliance with damage stability requirements be documented as per company's SMS and record retained for minimum 3 years.		Previously 8.8
Cargo Operations and Related Safety Management				
8.7	Are all Officers and ratings aware of the carriage requirements including emergency procedures for the specific cargo onboard and are Officers familiar with the vessel's cargo system, including emergency discharge arrangements?	Officers and ratings aware of the carriage requirements including emergency procedures for the specific cargo onboard.	Y	Previously 8.14 and 8.15
8.8	Are the cargo, ballast and stripping pumps, eductors and their associated instrumentation and controls including temperature monitoring, in good order and is there recorded evidence of regular testing?	Where temperature monitoring is provided, hourly records of temperatures should be maintained.		Previously 8.20

8.9	Are Officers aware of the column/cofferdam purging routines where deep well pumps are fitted and is the pump leakage within tolerable limits?	The cargo pump cofferdam must be purged on a regular basis to avoid blockages of cofferdams and monitoring leakage detection. Officers aware of the purging requirement and maker's recommendations.	Y	New
8.10	Are the Officers and ratings aware of the location of the cargo pump emergency stops, is the emergency cargo pump shutdown system in good order and is there recorded evidence of regular testing?	Are the Officers and ratings aware of the location of the cargo pump emergency stops	Y	Previously 8.22
8.11	Are the cargo and ballast system valves in good order and is there recorded evidence of regular testing?	The time taken for power operated valves to move from open to closed, and from closed to open, should be checked regularly as per manufacturer's guidance.		Previously 8.23
8.12	Are the cargo system ullage gauges, vapour locks and UTI tapes in good order and is there recorded evidence of regular testing?	Fixed gauges should be checked on a regular basis against portable tapes. If portable tapes/vapour locks are being used instead, observation will be raised.		Previously 8.24
8.13	Are the remote and local temperature and pressure sensors and gauges in good order and is there recorded evidence of regular testing?	Fixed temperature sensors should be compared with portable tapes on a regular basis. Pressure sensors should be checked against a reference pressure gauge periodically.		Previously 8.25
8.14	Are the cargo tank high level and overfill alarms in good order and is there recorded evidence of regular testing?	The last tests of the high-level alarms and that these are included within the PMS.		Previously 8.26
8.15	Where fitted, is the condition of the cargo tank heating system satisfactory, is it regularly tested and is any observation tank free of oil?	Alternative heating include heat exchangers on each cargo pump, and should be verified liquid tight and coating condition in good order.		Previously 8.27
Ullaging, Sampling and Closed Operations				
8.16	If the vessel is handling volatile or toxic cargoes, is it operating in a closed condition?	No gap		Previously 8.29
8.17	Is the vessel provided with an approved vapour control system?	No gap		Previously 8.30
8.18	Do tank hatches, tank cleaning apertures and sighting ports appear to be liquid and gas tight?	No gap		Previously 8.31

Venting Arrangements				
8.19	Are the Officers aware of the primary and secondary cargo tank venting systems and are the systems functioning correctly?	Officers aware of the primary and secondary cargo tank venting systems. Tankers constructed on or after 1 January 2017, the secondary means shall be capable of preventing over-pressure or under-pressure in the event of damage to, or inadvertent closing of, the means of isolation required in regulation 4.5.3.2.2. MSC.392(95)	Y	Previously 8.32 and 8.33
8.20	If stop valves are fitted which permit isolation of individual tanks from the common venting system, are they provided with positive locking arrangements and are the keys under the control of the person in overall charge of the cargo transfer?	Similar additional guidance as per 8.19		Previously 8.34
8.21	Are the P/V valves in good order, inspected and cleaned as part of a regular planned maintenance routine and are there records to support this?	No gap		Previously 8.35
Inert Gas System				
8.22	Was the inert gas system in use and operating satisfactorily at the time of the inspection?	Inert gas systems fitted on oil and chemical tankers of 8000 DWT and above keel laid date 01 Jan 2016. (Solas reg II - 2/4.5.5 and II - 2/16.3.3) Observation will be recorded if the oxygen delivery is more than 5% or if a high oxygen level alarm is not fitted, regardless of the date of delivery or if the oxygen percentage of the inert gas in the cargo tanks is more than 8%.		Previously 8.37
8.23	Is there evidence to show that regular maintenance has been conducted on the inert gas system, including the overhaul of the non-return valve(s)?	Evidence to show regular maintenance in line with the PMS including regular greasing and inspections.		Previously 8.39
8.24	Are the Deck Officers aware of required actions in the event of the inert gas failure and are all cargo tanks maintained under positive pressure throughout?	Deck Officers aware of required actions in the event of the inert gas failure and all cargo tanks maintained under positive pressure throughout	Y	Previously 8.40
8.25	Is the inert gas system including instrumentation, alarms, trips and pressure and oxygen recorders, in good	No gap		Previously 8.41

	order?			
8.26	Was the fixed oxygen analyser calibrated immediately prior to use of the inert gas system and do local and remote oxygen and pressure recorders, where fitted, agree?	No gap		Previously 8.45 and 8.46
8.27	Is the liquid level in the deck seal at the correct level, clearly visible and are Officers aware of requirements to periodically check the level?	Officers aware of requirements to periodically check the level. Observation will be raised if a dry-type deck seal is fitted.	Y	Previously 8.47
8.28	Does the P/V breaker appear to be in good order?	The P/V breaker should not be set to a lower pressure than that of the secondary venting system. P/V breaker should be set within the safe parameters of the tank structure.		Previously 8.48
8.29	If the vessel is provided with a nitrogen generator / bottle manifold system, are the Officers and crew aware of the specific hazards associated with nitrogen gas?	Personnel should be aware of the potential hazards associated with nitrogen and, in particular, those related to entering enclosed spaces or areas in way of tank vents or outlets which may be oxygen depleted.		New
8.30	Are Officers and ratings aware of safe entry requirements for the inert gas room(s), are these procedures being followed and where applicable, is fixed oxygen detection provided?	Officers aware of safe entry requirements. Vessels delivered on, or after 01 Jan 2016, two oxygen sensors shall be positioned at appropriate locations in the space or spaces containing the inert gas system as per FSS Ch 15 2.2.4.5.4. Independent mechanical extraction ventilation system providing six air changes per hour provided. The spaces shall be clearly marked with hazard notices warning of the dangers of asphyxiation.		New
8.31	Are the Officers familiar with the dangers associated with over pressurisation of the cargo tanks and are procedures implemented to avoid over pressure due to purging, blowing and pigging with nitrogen?	Officers aware of over pressurisation and the procedures to be applied. A risk assessment should be carried out with reference to guidance from ISGOTT 11.1.15.8. The flow rate of the supplied		New

		nitrogen should not exceed the maximum venting capacity of the ships PV valves or the shore vapour return system. Purging, blowing pigging etc should be conducted using Nitrogen and not compressed air.		
Crude Oil Washing				
8.32	Is the Crude Oil Washing system approved and are Officers aware of the requirements within the COW Manual?	Officers aware of the requirements within the COW Manual. All new crude oil tanker of 20,000 tons deadweight and above shall be fitted with a cargo tank cleaning system using crude oil washing as per MARPOL Annex I/33.1.	Y	Previously 8.52
8.33	Are the Officers aware of the IMO requirements for COW and is the vessel complying with such requirements?	Officers aware of the IMO requirements for COW	Y	Previously 8.51
8.34	If the vessel is Crude Oil Washing, has the COW system been tested for integrity, appropriate checks complete and all associated COW equipment in good operational order?	The oxygen content of each cargo tank to be crude oil washed shall be tested with portable equipment prior to COW and the results recorded in the deck or cargo log.		Previously 8.55
8.35	Is the tank cleaning heater, where fitted, effectively isolated from the crude oil washing line and any hydrant-type connections on the crude oil washing lines securely sealed?	No gap		Previously 8.58 and 8.59
8.36	Are records maintained of previous COW operations?	No gap		Previously 8.60
Static Electricity Precautions				
8.37	Are Deck Officers aware of the precautions necessary to avoid static discharge including maximum flow rates and settling periods for flammable cargoes in non-inert tanks?	Deck Officers aware of the maximum flow rates and settling periods to avoid static discharge	Y	Previously 8.61 and 8.62
8.38	Are Officers aware if the vessel is fitted with full depth sounding pipes, is this information clearly displayed and are Officers aware of the additional precautions relating to cargo tanks that are not fitted with full depth pipes?	Officers aware if the vessel is fitted with full depth sounding pipes and information clearly displayed	Y	Previously 8.63
8.39	Are precautions followed for metal tapes, gauging or sampling devices and portable tank cleaning equipment (as applicable) before being introduced into tanks?	All hoses for tank washing machines should be tested for electrical continuity in a dry condition prior to use, and in no case, should the resistance exceed 6 ohms per metre length.		Previously 8.64

		Hoses should be indelibly marked for identification. A record kept showing the date and the result of electrical continuity testing.		
8.40	Are Deck Officers aware of the hazards associated with tank cleaning after the carriage of volatile products and the need to avoid the free fall of liquid into tanks?	Deck Officers aware of the hazards associated with tank cleaning	Y	Previously 8.67 and 8.68
Manifold Arrangements				
8.41	Are the manifolds and associated valves in good order, blank flanges of an equivalent rating to that of the pipelines and pressure gauges fitted outboard of the manifold valves on both sides and monitored for leakage?	Manifolds and associated valves monitored for leakage and evidence of regular checks maintained. Manifold dimensions as per OCIMF/ CDI publication "Recommendations for Oil and Chemical Tanker Manifolds and Associated Equipment, First Edition 2017".		Previously 8.69 to 8.71
8.42	If the vessel is fitted with vapour return manifolds, are they in good order including those for SBM use as appropriate?	No gap		Previously 8.72 and 8.73
8.43	Does the vessel's piping system appear to be free of unauthorised inter-connections between cargo, bunker and ballast systems?	No gap		Previously 8.74
Pump Rooms				
8.44	On vessels with pump rooms and trunk spaces, are they free of evidence of significant leaks from machinery, pipework, valve glands and instrumentation and bilges clean?	Trunk spaces free from leak and bilges clean		Previously 8.75
8.45	Are bulkhead seals gas tight and, if required, well lubricated?	No gap		Previously 8.76
8.46	Is the pump room gas monitoring system in good order, regularly checked and are Officers aware of the alarm settings?	Also applicable to trunk spaces and to ballast pump rooms where fixed gas detection is installed. Officers aware of the alarm settings.	Y	Previously 8.77
8.47	Is the bilge pump in good order and can it be operated from a position outside the pump room?	The bilge system serving the cargo pump room shall be operable from outside the cargo pump-room.		Previously 8.78
8.48	Is all lighting in the pumproom or trunk space operational and does it appear adequate to illuminate the space?	Lighting in pumproom and trunk space operational and adequate, light bulbs with the same illumination are used.		Previously 8.79

Cargo Hoses				
8.49	If the vessel uses its own cargo hoses, are they in good order, pressure tested annually and is a record of all hose tests and inspections maintained on board?	Cargo hoses in service should have a documented inspection at least annually to confirm their suitability for continued use. Portable cargo pump hoses should be tested and maintained as per manufacturers guidelines.		Previously 8.80
Cargo Lifting Equipment				
8.50	Are all cranes and other lifting equipment properly marked, regularly inspected, tested and are the vessel's crew aware of maintenance requirements?	Vessels with a single hose crane, must have sufficient spare hoses to replace any defective hose. Monitoring the wear of slew bearing on cranes conducted as per bearing manufacturer recommendations. Vessel's crew aware of lifting equipment maintenance requirements.	Y	Previously 8.81
Ship to Ship Transfer Operations				
8.51	Are the Officers and crew familiar with the requirements and risks during ship-to-ship operations?	Officers and crew familiar with the requirements and risks. A risk assessment for STS transfer location and the STS operation. (STS Guide 1.4) Conducted under the co-ordination and advisory control of either Masters, an STS Superintendent or the POAC. And may be formally transferred to another suitably qualified person during extended operations (STS Guide 1.5.1). Procedures to monitor and assess permanent fenders and hoses.	Y	Previously 8.84
8.52	Does the POAC have the necessary qualifications and experience and are Officers aware of these requirements?	POAC have the necessary qualifications and experience for transfers involving MARPOL Annex I cargoes. For transfers involving cargoes other than MARPOL Annex I cargoes, STS Superintendent has similar qualification and experience as POAC, as well as with the type of cargo transferred.	Y	New

		Officers aware of these requirements.		
8.53	Are closed fairleads and mooring bitts provided?	No gap		Previously 8.85
8.54	Are Officers aware of the requirements of the ship-to-ship transfer checklists and are there records of STS operations maintained?	Officers aware of the requirements of the STS checklists and STS records maintained as per recommendations and include post feedback/ assessment by the Master. Last 12 months records checked for compliance.	Y	Previously 8.86
8.55	If a ship-to-ship transfer was in progress during the inspection, was it conducted in accordance with the recommendations of the OCIMF/ICS STS Transfer Guide?	STS Guide 3.10.4 followed as precaution against incendive arcing between the two ships when presenting the hose string for connection. Protection against synthetic mooring line chafing and failure followed as per STS Guide 6.6.2.		Previously 8.87
Combination Carriers				
8.56	Are operator's procedures provided and are records maintained for changing between the wet and dry modes?	No gap		Previously 8.88
8.57	Have the senior Deck Officers had at least one years' experience operating in wet service?	No gap		Previously 8.89
8.58	Are hatch covers of the dual seal type, are they seated correctly and are they sealed and gas tight?	No gap		Previously 8.90
8.59	Are hatch covers free of visible evidence of damage and are the corners of hatch coamings and adjacent decks free of visible cracks?	No gap		Previously 8.91
8.60	Do records indicate that the pipe tunnel is clean and free of evidence of leakage?	No gap		Previously 8.92
8.61	Are bilge pumping systems for forward spaces in good order?	No gap		Previously 8.93
8.62	Is the vessel equipped with bilge alarms in the forward spaces and holds?	No gap		Previously 8.94
8.63	If the vessel uses portable hoses for crude oil washing, are these in good order and do records support that they have been regularly tested.	No gap		Previously 8.95
Personnel Management				

8.64	Do all key personnel on board involved in DP operations comply with the IMCA and UKOOA minimum requirements for experience and training?	No gap		Previously 8.96
8.65	Do DP personnel undergo assessed refresher training e.g. DP CAP?	No gap		Previously 8.97
8.66	Record the DP manning arrangements.	No gap		Previously 8.98
8.67	Record the Engine Room manning arrangements during shuttle tanker operations.	No gap		Previously 8.99
8.68	Is there an Electronic Technician on-board with approved training on the maintenance of DP system?	No gap		Previously 8.100
8.69	Have Officers and ratings had shore-based training in helicopter handling operations?	No gap		Previously 8.101
Dynamic Positioning and Navigation Equipment				
8.70	Does the vessel have on board a copy of the most recent FME(C)A?	No gap		Previously 8.102
8.71	Do the failure modes meet IMO MSC Circ.645 with 'fail as set, or fail to zero'?	No gap		Previously 8.103
8.72	Is a record of the DP proving trials available on board?	No gap		Previously 8.104
8.73	Have the recommendations (if any) from the DP proving trials been addressed?	No gap		Previously 8.105
8.74	Does the vessel have on board a copy of the most recent annual DP trial report (if required)?	No gap		Previously 8.106
8.75	Have recommendations from the DP annual trial report been addressed and closed out as required?	No gap		Previously 8.107
8.76	Are all personnel involved in DP operations familiar with the FME(C)A?	No gap		Previously 8.108
8.77	If modifications have been undertaken, has the FME(C)A been up-dated and the modifications proven by testing?	No gap		Previously 8.109
Dynamic Positioning (DP) Operations				
8.78	Have DP operations been incident-free in the last 12 months?	No gap		Previously 8.110
8.79	Does the vessel have a DP Incident reporting system?	No gap		Previously 8.111
8.80	Does the vessel review the risk assessments for shuttle tanker operations prior to DP operations?	No gap		Previously 8.112
8.81	Is the DP control console located so that the DPO can also observe the controls, the external environment and the	No gap		Previously 8.113

	working operations of the vessel?			
8.82	Are manual controls and emergency stops located within easy reach?	No gap		Previously 8.114
8.83	What level of power/thrust can be achieved from the main propellers when going astern?	No gap		Previously 8.115
8.84	Can the controls for position reference systems be accessed within easy reach of the DP control station?	No gap		Previously 8.116
8.85	Does the vessel have a comprehensive DP operating manual on board?	No gap		Previously 8.117
8.86	Are all personnel involved in DP operations familiar with the manual and demonstrate an understanding of its contents?	No gap		Previously 8.118
8.87	Are checklists in place to cover bridge, engine room and electrical systems prior to DP operations?	No gap		Previously 8.119
8.88	Are DP Capability Plots in place to cover the normal and expected operations?	No gap		Previously 8.120
Dynamic Positioning Equipment				
8.89	Are all the thrusters in good order?	No gap		Previously 8.121
8.90	Is the Dynamic Positioning equipment on board in good order?	No gap		Previously 8.122
8.91	Are all position reference systems in good order?	No gap		Previously 8.123
8.92	Are the offsets adequately filed?	No gap		Previously 8.124
8.93	Does vessel have a data recorder that records all DP parameters?	No gap		Previously 8.125
8.94	Is there a procedure for checking of the secure power supply systems prior to DP operations?	No gap		Previously 8.126
8.95	If vessel is DP class 2 (or equivalent), does the DP system have a continuous analysis function checking that in terms of thrust and power the vessel can maintain position after the worst- case failure?	No gap		Previously 8.127
8.96	Do the operational procedures include guidance on number of generators to be running at different power loads and are DPOs and engineers familiar with them?	No gap		Previously 8.128
8.97	Are consequence analysis alarms used as input to the contingency matrix?	No gap		Previously 8.129

8.98	Is the DP system included within the Planned Maintenance System (PMS)?	No gap		Previously 8.130
Cargo Operations				
8.99	Are the appropriate loading terminal procedures manuals on board for each offshore terminal to which the vessel trades?	No gap		Previously 8.131
8.100	Are Deck Officers familiar with the appropriate loading terminal procedures manuals on board for each offshore terminal to which the vessel trades?	No gap		Previously 8.132
8.101	Are weather forecasts received and assessed before commencing offshore operations?	No gap		Previously 8.133
8.102	Are records of regular communications checks with the installation maintained?	No gap		Previously 8.134
8.103	Is there a checklist for bridge or bow control station instrumentation and control systems and has it been correctly completed?	No gap		Previously 8.135
8.104	Is there a checklist for engine room machinery and has it been correctly completed?	No gap		Previously 8.136
8.105	Does the vessel apply the same practices when loading from the offshore terminal as for an onshore terminal?	No gap		Previously 8.137
8.106	Are green line interlocks working satisfactorily?	No gap		Previously 8.138
8.107	Is there a service report available for the tension load cells?	No gap		Previously 8.139
8.108	Is the deluge system in good order and is it pressurised during loading?	No gap		Previously 8.140
8.109	Are the emergency shut-down systems in good order and tested regularly?	No gap		Previously 8.141
8.110	Is the telemetry system in good order?	No gap		Previously 8.142
Bow Loading Systems (BLS) and Submerged Turret Loading (STL) Operations				
8.111	Has the BLS been subject to an FME(C)A process?	No gap		Previously 8.143
8.112	Are the BLS and/or STL systems in good order?	No gap		Previously 8.144
8.113	Are checklists for the operation of the BLS and/or STL systems available and is there evidence of their consistent use?	No gap		Previously 8.145
8.114	Are seals on the STL buoy hatch and the STL room watertight door in good order?	No gap		Previously 8.146
8.115	Is the alarm for the STL room watertight door in good order and tested regularly?	No gap		Previously 8.147
8.116	Are indicators for closing devices in good	No gap		Previously

	order?			8.148
8.117	Are BLS and/or STL areas fitted with detection/extinguishing systems and are they in good order	No gap		Previously 8.149
Safety Management at Offshore Installations				
8.118	Have communications been established and is there a backup communication system?	No gap		Previously 8.150
8.119	Have communications been established with the field standby vessel?	No gap		Previously 8.151
8.120	Are written emergency procedures for offshore loading provided?	No gap		Previously 8.152
8.121	Are drills pertaining to these procedures held regularly?	No gap		Previously 8.153
8.122	Is there a procedure for emergency towing?	No gap		Previously 8.154
8.123	Are emergency towing trials carried out?	No gap		Previously 8.155
Pollution Prevention Specific to Offshore Installations				
8.124	Does the SOPEP address procedures specific to shuttle tanker operation?	No gap		Previously 8.156
8.125	Are BLS and/or STL spaces free of oil?	No gap		Previously 8.157
8.126	If an oil discharge monitor is fitted in the STL room, is it in good order?	No gap		Previously 8.158
8.127	Is the vessel equipped with an appropriate system for draining the BLS and/or STL spaces?	No gap		Previously 8.159

Chapter 8. Cargo and Ballast Systems – Chemicals

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
8.1	Are the Officers aware of the operator's policy statements, guidance and procedures, including information on maximum loading rates and venting capacities with regard to safe cargo operations?	Masters provided with information on maximum permissible loading rates for each cargo and ballast tank and, where tanks have a combined venting system, for each group of cargo or ballast tanks. When determining maximum loading rates for oil tankers, precautions against static electricity hazards and pipeline erosion as per ISGOTT Section 7.3.3.2 considered. Officers aware of the Company's SMS including information on maximum loading rates and venting capacities	Y	Previously 8.1 and 8.2
8.2	Are legible and up to date pipeline and/or mimic diagrams of cargo, inert gas and venting systems, as applicable, available in the pumproom(s) and cargo control area and are Deck Officers familiar with the systems?	Deck Officers familiar with the cargo operation ongoing and planned sequence of events during the watch.	Y	Previously 8.3
8.3	Are cargo pump performance curves available, are Deck Officers aware of the test requirements for cargo lines, vapour and inert gas lines on the system?	Deck Officers aware of the test requirements for the cargo lines, vapour lines and inert gas lines in good order and recorded evidence of regular testing. Pipelines should be visually examined and subjected to routine pressure tests to verify their condition. Other means of non-destructive testing or examination, such as ultrasonic wall thickness measurement, may be considered appropriate, but should always be supplemented by visual examination. 'Oil Transfer System' tested to 100% of their rated working pressure (MAWP) at least annually. And tested to 1.5 times their rated working pressure at least twice within any five-year period.	Y	Previously 8.40

		The cargo discharge piping of all tank vessels shall be tested at least once each year for tightness, at the maximum working pressure.		
8.4	Are Officers familiar with the information contained within the Procedures and Arrangements Manual, and is the manual accessible onboard?	P&A Manual approved by the Administration. Results of the stripping efficiency test recorded in the manual. Officers familiar the physical arrangements and all operational procedures with respect to cargo handling, tank cleaning, slops handling and cargo tank ballasting and deballasting.	Y	No change
8.5	Is the Cargo Record Book correctly completed and up to date?	Vessel provided with a Cargo Record Book, whether as part of the ship's official log-book or otherwise, in the form specified in appendix II.		No change
8.6	Are the Officers aware of the hazards of tank cleaning where flammable and/or toxic products have been carried, the controlled use of chemicals and solvents, gas freeing and steaming of cargo tanks?	The cargo tank cleaning additive meets Annex 10 of MEPC.2. Steaming only be carried out in tanks that either inerted or water washed and gas freed, with concentration of flammable gas not exceed 10% of the LFL. Manufacturers tank coating guidelines should be consulted. Officers aware of the hazards of tank cleaning flammable and/or toxic products.	Y	No change
Stability and Cargo Loading Limitations				
8.7	If a loading computer or programme is in use, is it class approved, regularly tested and are Officers aware of the test requirements including damage stability?	Ships constructed on or after 01 Jan 2016* and ships constructed before 01 Jan 2016* (by the first renewal survey on or after 01 Jan 2016, but before 01 Jan 2021**) are required to be fitted with a stability instrument capable of handling both intact and damage stability. (* 01 Jul 2016 and ** 01 Jul 2021 for gas carriers) Officers aware of the test requirements including damage stability.	Y	Previously 8.12 and 8.13

8.8	Has a cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability and are any limitations, where applicable understood by the cargo watch officers, clearly documented and signed?	Cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability as per ISGOTT Chapter 22. Every oil tanker of 5,000 tonnes deadweight or more shall have prompt access to computerised shore-based damage stability and residual structural strength calculation programs. The vessel should have an approved stability information book (SIB). Observation will be recorded if the condition not in accordance with the SIB.	Y	Previously 8.7, 8.8, 8.23, 8.24 and 8.25
8.9	Is the vessel free of inherent intact stability problems, are Officers aware of these problems or risks of structural damage from sloshing, and actions required if the vessel takes on an unstable condition and/or angle of loll?	Important restrictions other than maximum permitted cargo density will be recorded as an observation. Verification of compliance with damage stability requirements be documented as per company's SMS and record retained for minimum 3 years. Officers aware of the problems or risks of structural damage from sloshing, and actions required if the vessel takes on an unstable condition and/or angle of loll.	Y	Previously 8.11, 8.15, 8.16 and 8.17
8.10	Are all Officers and ratings aware of the carriage requirements including emergency procedures for the specific cargo onboard and chemicals in general and are Officers familiar with the vessel's cargo system, including emergency discharge arrangements?	For each chemical carried a review of the carriage requirements should have been made in order to ensure that the cargo plan contains all the necessary information for the safe carriage of the product. All Officers and ratings aware of the carriage requirements including emergency procedures.	Y	Previously 8.19 and 8.20
8.11	Can the Deck Officers demonstrate familiarity with the use of cargo compatibility charts and are dangers of co-mingling non-compatible cargoes considered?	Latest updated information for Appendix 1 (b) is in use onboard. Cargo plan identify and avoid the co-mingling of non-compatible cargoes. Deck Officers familiar with the use of cargo compatibility charts.	Y	Previously 8.22

Cargo Operations and Related Safety Management				
8.12	Are Officers aware of the documentation and handling requirements for cargoes with inhibitors, and if the cargo carried is required to be inhibited, is the required information available?	Officers aware of the documentation and handling requirements for cargoes with inhibitors	Y	Previously 8.26
8.13	Are Officers aware of the dangers associated with tank cleaning and ventilation after the carriage of volatile or toxic products and is a comprehensive tank cleaning plan established and followed prior to each operation?	Special attention given for tank entry after tank cleaning of toxic cargoes and also entry for sweeping tanks where some nontoxic/non-flammable cargoes can produce high levels of carbon monoxide. Officers must be aware of these potential dangers as test the tanks accordingly.	Y	Previously 8.30 and 8.31
8.14	Are Officers aware of the column/cofferdam purging routines where deep well pumps are fitted and is any pump leakage within tolerable limits?	The cargo pump cofferdam must be purged on a regular basis to avoid blockages of cofferdams and monitoring leakage detection. Acceptable leakage rate depends on the type of cargo and possible consequences in case of leakage can cause blockages to the cofferdam. Officers aware of the purging requirement and maker's recommendations.	Y	Previously 8.32
8.15	Are Deck Officers familiar with the requirements for passivation and pickling of stainless steel cargo tanks, are passivity tests performed as required and are there clear procedures available for the process?	The frequency of this test very much depend on the trade the vessel is engaged on. Appropriate PPE should be used for the operation and this should be included within the Company Procedures.	Y	Previously 8.33
8.16	If the vessel is provided with wall wash test equipment, are the Officers familiar with the wall wash test procedures and are the procedures comprehensive and do they consider the safety aspects of the process?	Safe and comprehensive wall wash test guidance provided and Officers familiar with the procedures.	Y	Previously 8.34
8.17	Are cargo samples safely stored within the main cargo area, and are Officers and crew aware of safe handling procedures?	Flammable liquid lockers shall be protected by an appropriate fire-extinguishing arrangement approved by the Administration. (SOLAS II-2 Reg 10 6.3.2 or alternatively Reg 10 6.3.3)	Y	Previously 8.35, 8.36 and 8.37
8.18	Are the cargo, ballast and stripping pumps, eductors and their associated instrumentation and controls, in good	The requirement is to provide an alarm. Hourly records of temperatures should be		Previously 8.38

	order and is there recorded evidence of regular testing?	maintained if provided.		
8.19	Are the cargo and ballast pump bearing, casing and shaft gland temperature monitoring sensors in good order and is there evidence of regular testing?	No gap		Previously 8.39
8.20	Are the Officers and ratings aware of the location of the cargo pump emergency stops, is the emergency cargo pump shutdown system in good order and is there recorded evidence of regular testing?	Officers and ratings aware of the location of the cargo pump emergency stops.	Y	Previously 8.41
8.21	Are the cargo and ballast system valves in good order and is there recorded evidence of regular testing?	Time taken for power operated valves to move from open to closed, and from closed to open, should be checked regularly.		Previously 8.42
8.22	Are the cargo system ullage gauges, vapour locks and UTI tapes in good order and is there recorded evidence of regular testing?	Fixed gauges should be checked on a regular basis against portable tapes.		Previously 8.43
8.23	Are the remote and local temperature and pressure sensors and gauges in good order and is there recorded evidence of regular testing?	Fixed temperature sensors compared with portable tapes on a regular basis. Pressure sensors checked against a reference pressure gauge periodically.		Previously 8.44
8.24	Are the cargo tank high level and overflow alarms in good order, independent of both the gauging devices and the overflow-control alarm system and is there recorded evidence of regular testing?	No gap		Previously 8.45 and 8.48
8.25	Are pipeline drains and stub pieces valved and capped and are cargo line drains suitably positioned to preclude liquid remaining in the line after draining?	Flanges of the loading and discharge manifold connections shall be provided with spray shields, which may be portable; and in addition, drip trays for leak.		Previously 8.46 and 8.47
8.26	Are Officers aware of the requirements for calibration of key cargo instrumentation, including temperature and pressure gauges and are records onboard to verify this being performed?	Officers aware of the calibration requirement and records maintained onboard.	Y	Previously 8.49
8.27	Where fitted, is the condition of the cargo tank heating system satisfactory, is it regularly tested and is any observation tank free of oil?	When products for which 15.12, 15.12.1 or 15.12.3 are listed in column o in the table of chapter 17 are being heated or cooled, sample check for the presence of cargo in system conducted. The sampling equipment shall be located within the cargo area and be capable of detecting the presence of any toxic		Previously 8.51

		cargo being heated or cooled. When overheating or overcooling could result in a dangerous condition, an alarm system which monitors the cargo temperature shall be provided.		
Ullaging, Sampling and Closed Operations				
8.28	If fixed tank gauges are not fitted, are sufficient portable tapes provided to simultaneously gauge each tank being worked?	No gap		Previously 8.53
8.29	Are the Officers aware of what is considered a volatile or toxic cargo, is the vessel operating in a closed condition where a volatile or toxic cargo is carried and do tank hatches, tank cleaning apertures and sighting ports appear to be liquid and gas tight?	Officers aware of what is considered as volatile or toxic cargo	Y	Previously 8.54 and 8.56
Inert Gas Systems				
8.30	Was the inert gas system in use and operating satisfactorily at the time of the inspection?	Similar as in Ch 8 Petroleum		New
8.31	Is there evidence to show that regular maintenance has been conducted on the inert gas system, including the overhaul of the non-return valve(s)?	Similar as in Ch 8 Petroleum		New
8.32	Are the Deck Officers aware of required actions in the event of the inert gas failure and are all cargo tanks maintained under positive pressure throughout?	Similar as in Ch 8 Petroleum		New
8.33	Is the inert gas system including instrumentation, alarms, trips and pressure and oxygen recorders, in good order?	Similar as in Ch 8 Petroleum		New
8.34	Was the fixed oxygen analyser calibrated immediately prior to use of the inert gas system and do local and remote oxygen and pressure recorders, where fitted agree?	Similar as in Ch 8 Petroleum		New
8.35	Is the liquid level in the deck seal at the correct level, clearly visible and are Officers aware of requirements to periodically check the level?	Similar as in Ch 8 Petroleum		New
8.36	Does the P/V breaker appear to be in good order?	Similar as in Ch 8 Petroleum		New
8.37	If the vessel is provided with a nitrogen generator / bottle manifold system, are the Officers and crew aware of the specific hazards associated with nitrogen gas?	Similar as in Ch 8 Petroleum		New

8.38	Are Officers and ratings aware of safe entry requirements for the inert gas room(s), are these procedures being followed and where applicable, is fixed oxygen detection provided?	Similar as in Ch 8 Petroleum		New
8.39	Are the Officers familiar with the dangers associated with over pressurisation of the cargo tanks and are procedures implemented to avoid over pressure due to purging, blowing and pigging with nitrogen?	Similar as in Ch 8 Petroleum		New
Venting Arrangements				
8.40	Are the Officers aware of the primary and secondary cargo tank venting systems and are the systems functioning correctly?	Officers aware of the primary and secondary cargo tank venting systems	Y	Previously 8.59
8.41	Are the P/V valves in good order, inspected and cleaned as part of a regular planned maintenance routine and are there records to support this?	No gap		Previously 8.60
8.42	Are the Officers aware of the additional precautions operating with a vapour return line connected and are appropriate transfer procedures in place?	Officers aware of the additional precautions operating with a vapour return line connected	Y	Previously 8.62
Static Electricity Precautions				
8.43	Are Deck Officers aware of the precautions necessary to avoid static discharge including maximum flow rates and settling periods for flammable cargoes in non-inert tanks?	Deck Officers aware of the precautions necessary to avoid static discharge including maximum flow rates and settling periods.	Y	Previously 8.63 and 8.64
8.44	Are Officers aware if the vessel is fitted with full depth sounding pipes, is this information clearly displayed and are Officers aware of the additional precautions relating to cargo tanks that are not fitted with full depth pipes?	Officers aware if the vessel is fitted with full depth sounding pipes and information clearly displayed. And the additional precautions if not fitted with full depth pipes.	Y	Previously 8.65
8.45	Are precautions followed for metal tapes, gauging or sampling devices and portable tank cleaning equipment (as applicable) before being introduced into tanks?	Equipment made entirely of non-metallic materials may, in general, be used.		Previously 8.66 and 8.67
8.46	Are Deck Officers aware of the hazards associated with tank cleaning after the carriage of volatile products and the need to avoid the free fall of liquid into tanks?	Deck Officers aware of the hazards associated with tank cleaning of volatile products.	Y	Previously 8.68 and 8.70
8.47	Are personnel aware of the hazards associated with steaming cargo tanks after the carriage of volatile products?	No gap		Previously 8.69

8.48	Are cargo pipe joints bonded?	No gap		Previously 8.71
Manifold Arrangements				
8.49	Are the manifolds and associated valves in good order, blank flanges of an equivalent rating to that of the pipelines and pressure gauges fitted outboard of the manifold valves on both sides and monitored for leakage?	Evidence of regular checks for manifold valve leakage maintained. Where spool pipes (jumpers) are installed to join 2 or more manifolds together, the spool pipes shall be of the same rating as the manifold pipes and provided with maker's test certificates.		Previously 8.72 to 8.78
8.50	Is the vessel free of unauthorised inter-connections between cargo, bunker and ballast systems?	No gap		Previously 8.79
Cargo Pump Room				
8.51	On vessels with pump rooms and trunk spaces, are they free of evidence of significant leaks from machinery, pipework, valve glands and instrumentation and are bilges clean?	The bilge system serving the cargo pump-room shall be operable from outside the cargo pump-room. One or more slop tanks for storage of contaminated bilge water or tank washings shall be provided. A shore connection with a standard coupling or other facilities provided for transferring contaminated liquids to onshore reception facilities. Pump discharge pressure gauges shall be provided outside the cargo pump-room.		Previously 8.80
8.52	Are bulkhead seals gas tight and, if required, well lubricated?	Where machinery is driven by shafting passing through a bulkhead or deck, gastight seals with efficient lubrication or other means of ensuring the permanence of the gas seal shall be fitted in way of the bulkhead or deck.		Previously 8.81
8.53	Is the pump room gas monitoring system in good order, regularly checked and are Officers aware of the alarm settings?	Officers aware of the alarm settings	Y	Previously 8.82
8.54	Is the bilge pump in good order and can it be operated from a position outside the pump room?	No gap		Previously 8.83
Safety Equipment				
8.55	Are the Officers aware of the requirements for the provision of protective equipment, is there adequate protective equipment onboard and in effective use?	Officers aware of the requirement for PPE equipment, adequate and effective	Y	Previously 8.85

8.56	Are Officers familiar with the safety equipment requirements of the IBC or BCH Code and is the safety equipment provided in accordance with the code in good order?	Officers familiar with IBC and BCH Code.	Y	Previously 8.86
8.57	Are the Officers aware of the safe stowage requirements of the safety equipment and are these requirements being followed?	No gap	Y	Previously 8.87
8.58	Has the breathing apparatus required by the IBC or BCH Codes examined by an expert agency annually, are the Officers familiar with the onboard inspection requirements and is this logged accordingly?	Officers familiar with the onboard inspection requirements and logged accordingly	Y	Previously 8.88
8.59	Are the Officers and ratings familiar with donning of the emergency escape sets where provided and are these sets in good order?	Officers and ratings familiar with donning of the emergency escape and these sets in good order	Y	Previously 8.90
8.60	Does the Company preclude the use of filter type respirators onboard and are Officers and ratings aware of these requirements?	Officers and ratings aware of the filter type respirators requirements	Y	Previously 8.91
8.61	Are the crew aware of the locations and operation of the decontamination showers and eye-wash, and are the showers in good operational order in suitably marked locations?	Crew aware of the locations and operation of the showers	Y	Previously 8.92
Cargo Hoses				
8.62	If the vessel uses its own cargo hoses, are they in good order, pressure tested annually and is a record of all hose tests and inspections maintained on board?	Cargo hoses in service should have a documented inspection at least annually to confirm their suitability for continued use. A pressure test to 1.5 times the Rated Working Pressure (RWP) and the electrical continuity test. Portable cargo pump hoses should be tested and maintained as per manufacturers guidelines.		Previously 8.94
Cargo Lifting Equipment				
8.63	Are all cranes and other lifting equipment properly marked, regularly inspected, tested and are the vessel's crew aware of maintenance requirements?	Vessels with a single hose crane, must have sufficient spare hoses to replace any defective hose. Monitoring the wear of a slew bearing on cranes conducted as per bearing manufacturer recommendations. Vessel's crew aware of lifting equipment maintenance requirements.	Y	Previously 8.95

Chapter 8. Cargo and Ballast Systems – LPG

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
8.1	Are the Officers aware of the operator's policy statements, guidance and procedures, including information on maximum loading rates and instructions with regard to safe cargo operations?	Masters should be provided with information on maximum permissible loading rates for each cargo and ballast tank and for each group of cargo or ballast tanks. Officers aware of the Company's SMS including information on maximum loading rates	Y	Previously 8.1 and 8.2
8.2	Are the Officers aware of any loading limitations for the vessel and are these limitations, if applicable, clearly posted in the cargo control area?	Officers aware of any loading limitations and clearly posted in the cargo control area	Y	Previously 8.3
8.3	Are legible and up-to-date pipeline and/or mimic diagrams of cargo, inert gas and venting systems, as applicable, available in the cargo control area and are Deck Officers familiar with the systems?	deck officer holding the watch is familiar with the cargo operation ongoing and planned sequence of events during the watch.	Y	Previously 8.4
8.4	Are Officers familiar with the information contained within the Procedures and Arrangements Manual, and is the manual accessible onboard?	Officers familiar with the information contained within the P&A manual and accessible onboard	Y	Previously 8.5
8.5	Is the Cargo Record Book correctly completed and up to date?	No gap		Previously 8.6
Stability and Cargo Loading Limitations				
8.6	Has a cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability and are any limitations, where applicable understood by the cargo watch officers and clearly documented?	Cargo plan calculations have been made for stress and stability conditions for the start, interim and completion of transfer conditions. Regular monitoring of stress and stability taken place throughout cargo transfer to ensure conditions have been maintained within design limits. Vessel should be able to demonstrate that an independent check of the cargo line up.		Previously 8.24 to 8.26
8.7	If a loading computer or programme is in use, is it class approved, regularly tested and are Officers aware of the test requirements including damage stability?	Ships constructed on or after 01 Jan 2016* and ships constructed before 01 Jan 2016* (by the first renewal survey on or after 01 Jan 2016, but before 01 Jan 2021**) are required to be fitted with a stability instrument capable of handling both intact and damage	Y	Previously 8.9, 8.12 and 8.13

		stability. (* 01 Jul 2016 and ** 01 Jul 2021 for gas carriers) Officers aware of the test requirements including damage stability.		
8.8	Is the vessel free of inherent intact stability problems, are Officers aware of these problems or risks of structural damage from sloshing, and actions required if the vessel takes on an unstable condition and/or angle of loll?	Verification of compliance with damage stability requirements be documented as per company's SMS and record retained for minimum 3 years.	Y	Previously 8.11, 8.15, 6.16 and 8.17
Cargo Operations and Related Safety Management				
8.9	Are all Officers and ratings aware of the carriage requirements including emergency procedures for the specific cargo onboard and gases in general and are Officers familiar with the vessel's cargo system, including emergency discharge arrangements?	Officers and rating to aware the carriage requirement. Officers familiar with emergency discharge requirement	Y	Previously 8.19, 8.20 and 8.22
8.10	Is the Chief Officer familiar with the term 'reference temperature' and is he/she aware of the reference temperature for the existing cargo?	Chief Officer familiar with the reference temperature for the existing cargo.	Y	Previously 8.21
8.11	Is a cargo compatibility chart available?	Charterers instructions for cargo compatibility issues should be followed and checked with the ship's natural ability to segregate. Special attention must be given to the ship's reliquefaction system, if need to replace the lubricating oil in compressors after changing cargoes. Refrigerants used for reliquefaction shall be compatible with the cargo or other refrigerants used and may come into contact.		Previously 8.23
8.12	Are cargo operations being carried out and logged in accordance with the plan?	The log may be in electronic.		Previously 8.26
8.13	Are Officers aware of the documentation and handling requirements for cargoes with inhibitors, and if the cargo carried is required to be inhibited, is the required information available?	Where products are required to be inhibited, the certificate shall be supplied before departure, otherwise the cargo shall not be transported. In cases where no inhibitor has been added, or the inhibitor concentration is insufficient, any inert gas used for the purposes of 17.6 shall contain no more oxygen than 0.1% by volume Officers aware of the	Y	Previously 8.27

		documentation and handling requirements for cargoes with inhibitors		
8.14	Are all Officers aware of the emergency procedures for dealing with leakage, spillage or fire involving the cargo?	Contingency plans for spillage of cargo carried at ambient temperature, shall take account of potential local temperature reduction such as when the escaped cargo has reduced to atmospheric pressure and the potential effect of this cooling on hull steel.	Y	Previously 8.28
Cargo Handling and Monitoring Equipment				
8.15	Are the cargo, booster, ballast and stripping pumps, eductors and their associated instrumentation and controls, where fitted, in good order, free of leaks and is there evidence of regular testing?	Officers should understand the higher manifold pressures involved when operating deepwell pumps in series with booster pumps.	Y	Previously 8.33
8.16	Are the Officers aware of the operational requirements for the cargo heater and/or vaporiser, where fitted, are they in good order, and is there evidence of regular pressure testing?	Officers aware of the operational requirements for cargo heater / vaporiser	Y	Previously 8.34
8.17	Are cargo pump performance curves available, are Deck Officers aware of the test requirements for cargo lines, vapour and inert gas lines on the system?	Similar guideline as per Chemical		New
8.18	Are the Cargo and ballast system valves in good order and is there evidence of regular testing?	Valve closing times should be periodically checked with manufacturers data to ensure they do not create potential surge pressures in system when closed.		Previously 8.37
8.19	Are the Officers aware of the test requirements for cargo system remote and local tank pressure, temperature, and level sensors and gauges, and are these in good order with evidence of regular testing?	Each cargo tank shall be provided with at least two devices for indicating cargo temperatures, one placed at the bottom of the cargo tank and the second near the top of the tank, below the highest allowable liquid level. The lowest temperature for which the cargo tank has been designed, shall be clearly indicated by means of a sign on or near the temperature indicating devices. Officers aware of the test requirements for cargo system sensors	Y	Previously 8.38 and 8.39

8.20	Are the Officers aware of the test requirements for the cargo tank high level and overflow alarms, and are they in good order with evidence of regular testing and in use for both cargo loading and discharging?	Full loading after delivery and after each dry-docking, testing of high-level alarms shall be conducted by raising the cargo liquid level in the cargo tank to the alarm point. Systems shall be tested prior to cargo operation in accordance with 18.6.2. Officers aware of the test requirements and evidence of regular testing available.	Y	Previously 8.40
8.21	Are tank domes, associated fittings in good order, free from corrosion and leaks?	No gap		Previously 8.43 and 8.44
8.22	Are Officers aware of safe cargo sampling procedures, are sample lines provided for both liquid and vapour with double valve arrangement on the liquid line and capped when not in use?	The sampling system shall be of a closed loop design to ensure that cargo liquid and vapour are not vented to atmosphere. (IGC 5.6.5.1) The liquid sampling systems shall be provided with two valves on the sample inlet. (IGC 5.6.5.2) Vapour samples may be fitted with a single valve and shall also be fitted with a closure plug or flange. (IGC 5.6.5.5) Officers shall ensure that protective clothing appropriate to the hazards of the cargo is used by everyone involved in the operation. And that the sampling equipment is suitable for the temperatures and pressures involved, including cargo pump discharge pressure, if relevant.	Y	Previously 8.45
8.23	Where any cargo or vapour lines are insulated, is the insulation in good order and are inspection routines in place?	There are various methods available to inspect for corrosion under insulation (CUI) including profile radiography, ultrasonic spot readings, and insulation removal. Whatever method used should provide an effective sample check on all insulated lines provided onboard and effectively planned for vessels repair periods.		Previously 8.47
8.24	Where cargo or vapour lines are isolated from the structure, are joints electrically bonded?	Except where bonding straps are used, it shall be demonstrated that the electrical resistance of each joint or connection is less than 1 M.		Previously 8.48
8.25	Are cargo and vapour line expansion arrangements in good order?	The preferred method outside the cargo tanks is by means of offsets,		Previously 8.49

		bends or loops, but multi-layer bellows may be used if offsets, bends or loops are not practicable. (IGC 5.7.1)		
8.26	Are liquid and vapour lines free to move inside their clamps?	No gap		Previously 8.50
8.27	Are pipeline drains and stub pieces valved and capped and in good order?	No gap		Previously 8.51
8.28	Are cargo line and system relief valves in good order and are Officers aware of the requirements?	Officers aware of the relief valves requirements	Y	Previously 8.52
8.29	Are cargo pipelines free of screwed-in connections?	No gap		Previously 8.53
8.30	Is the cargo tank high level alarm system independent of both the gauging system and in the case of IGC vessels, also independent of the high level shut-down (overflow control) system and are Officers aware of the override procedures where provided?	Where arrangements are provided for overriding the overflow control system, they shall be such that inadvertent operation is prevented. When this override is operated, continuous visual indication shall be given at the relevant control station(s) and the navigation bridge. (IGC 13.3.7) Officers aware of the override procedures.	Y	Previously 8.54
8.31	Are there records of the calibration of key cargo instrumentation, including temperature and pressure gauges?	Instruments shall be tested to ensure reliability under the working conditions and recalibrated at regular intervals. Test procedures for instruments and the intervals between recalibration shall be in accordance with manufacturer's recommendations. (IGC 13.1.3) Calibration should be carried out preferably at intervals not exceeding 36 months.		Previously 8.55
8.32	Are the Officers aware of the dangers of using slip tubes where fitted and do procedures preclude their use except for emergencies?	The design and installation shall ensure that no dangerous escape of cargo can take place when opening the device. Such gauging devices shall be so designed that the maximum opening does not exceed 1.5 mm diameter or equivalent area, unless the device is provided with an excess flow valve. (IGC 13.2.3.4) Officers aware of the dangers of using slip tube and the procedures in emergencies	Y	Previously 8.56

Cargo Compressor and Motor Rooms				
8.33	Are the Officers familiar with the operation of the cargo conditioning (reliquefaction) plant and associated machinery and is instrumentation in good order?	Officers familiar with the operation	Y	Previously 8.61
8.34	Are the crew aware of the hazards of the cargo compressor and motor rooms and are they clean and free of combustible material?	Crew aware of the hazards	Y	Previously 8.62
8.35	Are the bulkhead seals between the compressor room and the motor room gas tight and well lubricated?	Alternatively, such equipment may be driven by certified safe electric motors adjacent to them if the electrical installation complies with the requirements of chapter 10.		Previously 8.63
8.36	Is the compressor room free of gas leaks?	No gap		Previously 8.64
8.37	Is the compressor room well-lit and are electrical fittings suitable for use in gas-hazardous areas and in good order?	No gap		Previously 8.65
8.38	Are Officers aware of the requirements for the compressor room ventilation system and is the system maintaining negative relative pressure?	Officers aware of the requirements		Previously 8.66
8.39	Are Officers aware of the requirements for the motor room ventilation system and is the system maintaining relative positive pressure and operating satisfactorily?	Officers aware of the requirements	Y	Previously 8.67
8.40	Are the Officers aware of the requirements for airlocks, are the alarms in good order and in the event of pressure in the air-lock lost, will the shutdown system operate correctly?	In ships carrying flammable products, electrical equipment that is located in spaces protected by airlocks and not of the certified safe type, shall be de-energized in case of loss of overpressure in the space.		Previously 8.68, 8.69 and 8.70
8.41	Are the Officers familiar with the operation and requirements of the fixed gas detection equipment and is the equipment in good order?	Alarms shall be activated when the vapour concentration by volume reaches the equivalent of 30% LFL in air. (IGC 13.6.15) Officers familiar with the operation and requirements of fixed gas detection equipment	Y	Previously 8.71
8.42	Are the Officers aware of the requirements for setting fixed gas detector sample points and, where applicable, are they fitted at the appropriate level for the cargo being carried?	Officers aware of the requirements	Y	Previously 8.72

8.43	Where Ethylene Oxide and Propylene Oxide cargoes may be carried, are the Officers aware of the isolation requirements for the compressors and, if applicable, are the compressors isolated at the time?	Cast iron, mercury, aluminium alloys, copper and alloys of copper, silver and its alloys, magnesium and some stainless steels are unsuitable for the handling of ethylene oxide. Indirect cycle refrigeration plant is required for these cargoes.		Previously 8.73
Void Spaces and Seals - Type C Cargo Tanks				
8.44	Are the Officers aware of the environmental control of the void spaces and are void space seals where fitted in good order. Is the environmental control of void spaces satisfactory?	Other Than Type C. Interbarrier and hold spaces associated with cargo containment systems for flammable gases requiring full or partial secondary barriers shall be inerted with a suitable dry inert gas. For non-flammable gases, the spaces may be maintained with a suitable dry air or inert atmosphere. Type C. If the cargo is carried at ambient temperature, the requirement for dry air or inert gas is not applicable. Officers aware of the environmental control of the void spaces.	Y	Previously 8.74 and 8.75
8.45	Are Officers familiar with the inspection requirements for the cargo tank insulation, where fitted, and is the insulation reported to be in good condition?	Officers familiar with the inspection requirements for cargo tank insulation.	Y	Previously 8.76
8.46	Are Officers aware of the setting requirements for relief valves for void spaces, hold spaces and primary and secondary barriers and, where fitted are they in good order?	All cargo tanks shall be provided with a pressure relief system appropriate to the design of the cargo containment system and the cargo being carried. Hold spaces and interbarrier spaces, which may be subject to pressures beyond their design capabilities, shall also be provided with a suitable pressure relief system. Interbarrier spaces shall be provided with pressure relief devices. Hold spaces without open connection to the atmosphere	Y	Previously 8.77

		should be provided with suitable pressure gauges. Officers aware of the setting requirements.		
Void and Interbarrier Spaces and Seals – other cargo tank types				
8.47	Are the Officers familiar with the monitoring requirements of the interbarrier spaces and are these regularly monitored, and the results recorded?	Officers familiar with the monitoring requirements	Y	Previously 8.78
8.48	Are the relief valves for the hold spaces and primary and secondary barriers in good order?	No gap		Previously 8.79
8.49	Is there a means to sample for ingress of water into the interbarrier spaces provided and are checks being recorded?	Where cargo is carried in a cargo containment system not requiring a secondary barrier, suitable drainage arrangements for the hold spaces that are not connected with the machinery space shall be provided. Means of detecting any leakage shall be provided. Where there is a secondary barrier, suitable drainage arrangements for dealing with any leakage into the hold or insulation spaces through the adjacent ship structure shall be provided.		Previously 8.81
Inert Gas Systems				
8.50	Is the inert gas system and/or storage and associated pipework, where fitted, in good order?	Where insulation spaces are continually supplied with an inert gas as part of a leak detection system, means shall be provided to monitor the quantity of gas being supplied to individual spaces.		Previously 8.82
8.51	Are Officers aware of the arrangements to prevent the backflow of cargo vapour into the inert gas system and is this arrangement in place?	Officers aware of the arrangements in place to prevent backflow.	Y	Previously 8.83
Pressure Relief and Venting Systems				
8.52	Are the Officers aware of the requirements for setting the relief valves, are certificates of test available and clear procedures for changing MARVS as applicable?	The setting of the PRVs shall not be higher than the vapour pressure that has been used in the design of the tank. Where two or more PRVs are fitted, valves comprising not more than 50% of the total relieving capacity may be set at a pressure up to 5% above MARVS to allow	Y	Previously 8.84

		sequential lifting, minimizing unnecessary release of vapour. Officers responsible clearly understand the procedures to be followed for changing settings.		
8.53	Are the Officers familiar with the vent outlet arrangements and, as fitted, are protective or flame screens in good order and regularly inspected?	Suitable protection screens of not more than 13 mm square mesh shall be fitted on vent outlets. Officers familiar with the vent outlet arrangements	Y	Previously 8.88
8.54	Is there a liquid sensor in the liquid pressure relief valve collecting tank or, if not fitted, in the vent mast?	The PRVs and piping shall be arranged so that liquid can, under no circumstances, accumulate in or near the PRVs.		Previously 8.89
8.55	Are Officers familiar with the operation of any fixed fire extinguishing systems on the vent masts, where fitted, and are the systems in good order and operational?	There is no mandatory requirement for fixed extinguishing systems on the vent mast. However, where fitted these should be in good order and clearly identified. Officers familiar with the operation of fixed fire extinguishing system on the vent masts	Y	Previously 8.90
Emergency Shutdown System				
8.56	Are Officers familiar with the operation of the Emergency Shut Down (ESD) system, and is the system regularly tested operational?	The ESD control system shall be configured so as to enable the high-level testing required in 13.3.5 to be carried out in a safe and controlled manner.		Previously 8.94 - 8.96
8.57	Are personnel aware of the locations of ESD points, and auxiliary equipment shut down requirements?	An input to the ESD system from the overflow control system required by 13.3 may be provided to stop any cargo pumps or compressors' running at the time a high level is detected, as this alarm may be due to inadvertent internal transfer of cargo from tank to tank. Personnel aware of the locations of ESD points, and auxiliary equipment shut down requirements	Y	Previously 8.93
8.58	Are Officers aware of the requirements of fusible plugs, and are they fitted on the liquid domes, in the vicinity of the manifolds and in good order?	Officers aware of the requirements of fusible plugs	Y	Previously 8.97
Manifold Arrangements				
8.59	Are cargo and vapour manifold arrangements satisfactory?	If the cargo tank MARVS exceeds 0.07 MPa, an additional manual valve shall be provided. (IGC		Previously 8.98 - 8.100

		5.5.3.2) Bow or stern loading and unloading lines that are led past accommodation spaces, service spaces or control stations shall not be used for the transfer of products requiring a type 1G ship. Bow or stern loading and unloading lines shall not be used for the transfer of toxic products as specified in 1.2.53, where the design pressure is above 2.5 MPa. (IGC 3.8.2)		
8.60	Are the manifolds and associated valves in good order, blank flanges of an equivalent rating to that of the pipelines and pressure gauges securely fitted outboard of the manifold valves on both sides and monitored for leakage?	No gap		Previously 8.101 - 8.105
8.61	Are the manifold valves and lines clearly marked as to whether they are liquid or vapour and are drains and purge pipes where fitted valved and capped?	No gap		Previously 8.106 and 8.107
8.62	Are Officers aware of the procedures for the use of manifold strainers, and where fitted, are the strainers not being by-passed?	There is no mandatory requirement for fitting strainers on LPG manifolds. However, where fitted they must be in good order and frequently checked and cleaned as required. Officers aware of the procedures for the use of manifold strainers.	Y	Previously 8.108
8.63	Are liquid spill arrangements adequate, taking into account the lowest temperature cargoes which the vessel is certified to carry?	The deck around the manifold area constructed of the material as specified in the requirements of the IMO publication `International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk', `Materials for Construction' or be protected by sheathing compatible with low-temperature liquids.		Previously 8.109
Safety Equipment				
8.64	Are crew members aware of the requirements for the use of protective equipment and is there suitable protective equipment available and in use for all crew members engaged in cargo operations?	Personal protective and safety equipment required in this chapter shall be kept in suitable, clearly marked lockers located in readily accessible places. (IGC 14.1.2)	Y	Previously 8.110

8.65	Are the Officers familiar with the requirements for provision of safety equipment onboard, is the safety equipment in good order and are Officers capable of donning the equipment satisfactorily?	The compressed air equipment shall be inspected at least once a month by a responsible officer and the inspection logged in the ship's records. This equipment shall also be inspected and tested by a competent person at least once a year. Officers familiar with the requirement and donning of the equipment.	Y	Previously 8.111
8.66	Are crew members familiar with the requirements for personal protection for toxic products and donning of the emergency escape sets where provided?	Crew members familiar with the requirements for personal protection for toxic products.	Y	Previously 8.115
8.67	Are decontamination showers and an eye-wash, where required, provided in suitably marked locations and operating correctly?	No gap		Previously 8.118
8.68	Are Officers aware of the operation of the chemical dry powder system, and is the system in good order?	Annual maintenance of fixed dry chemical powder systems shall include agitating the dry chemical powder charge with nitrogen in accordance with system manufacturer's instructions. On a two-yearly basis a sample of dry powder shall be subject to test for moisture content. Officers aware of the operation of chemical dry powder system	Y	Previously 8.119
8.69	Are the Officers aware of the maintenance requirements for the water spray system and is the system in good order?	Water-spray system for cooling includes all exposed emergency shut-down (ESD) valves and exposed lifeboats, liferafts and muster stations facing the cargo area, regardless of distance to cargo area. Officers aware of the maintenance requirements for the water spray system.	Y	Previously 8.120
8.70	Are the Officers familiar with the fixed fire extinguishing systems installed within enclosed spaces containing cargo-handling equipment?	Enclosed spaces where cargo compressors or pumps, cargo processing units, are located, including those supplying gas fuel to the engine-room, and the cargo motor room within the cargo area of any ship, shall be provided with a fixed fire-extinguishing system complying with the provisions of the FSS Code and taking into	Y	Previously 8.121

		account the necessary concentrations/ application rate required for extinguishing gas fires. Officers familiar with the fixed fire extinguishing systems installed within enclosed spaces containing cargo-handling equipment		
8.71	Is the safety equipment inspected on board monthly and are records available?	No gap		Previously 8.117
Cargo Hoses				
8.72	If the vessel uses its own cargo hoses, are they in good order, pressure tested annually to their design working pressure and is a record of all hose tests and inspections maintained on board?	Original hose certificates shall be available onboard including the test data and compatibility data to ensure the hose safe for use with the existing cargo.		Previously 8.122
Cargo Lifting Equipment				
8.73	Are all cranes and other lifting equipment properly marked, regularly inspected, tested and are the vessel's crew aware of maintenance requirements?	Vessels with a single hose crane, must have sufficient spare hoses to replace any defective hose. Monitoring the wear of a slew bearing on cranes conducted as per bearing manufacturer recommendations. Vessel's crew aware of lifting equipment maintenance requirements.	Y	Previously 8.123
Ship to Ship Transfer Operations				
8.74	Are operator's procedures provided for ship-to-ship operations?	No gap		Previously 8.125
8.75	Are the Officers and crew familiar with the requirements and risks during ship-to-ship operations?	Officers and crew familiar with the requirements and risks. A risk assessment for STS transfer location and the STS operation. (STS Guide 1.4) Conducted under the co-ordination and advisory control of either Masters, an STS Superintendent or the POAC. And may be formally transferred to another suitably qualified person during extended operations (STS Guide 1.5.1). Procedures to monitor and assess permanent fenders and hoses.	Y	New

8.76	Does the POAC have the necessary qualifications and experience and are Officers aware of these requirements?	POAC have the necessary qualifications and experience for transfers involving MARPOL Annex I cargoes. For transfers involving cargoes other than MARPOL Annex I cargoes, STS Superintendent has similar qualification and experience as POAC, as well as with the type of cargo transferred. Officers aware of these requirements.		New
8.77	Are sufficient closed fairleads and mooring bitts provided?	It is recommended that provision be made for securing fender lines. (STS Guide 9.3)		Previously 8.126
8.78	Are Officers aware of the requirements of the ship-to-ship transfer checklists and are there records of STS operations maintained?	Officers aware of the requirements of the STS checklists and STS records maintained as per recommendations and include post feedback/ assessment by the Master. Past records checked for compliance.	Y	Previously 8.127
8.79	If a ship-to-ship transfer was in progress during the inspection, was it conducted in accordance with the recommendations of the OCIMF/ICS STS Transfer Guide?	STS Guide 3.10.4 followed as precaution against incendive arcing between the two ships when presenting the hose string for connection. Protection against synthetic mooring line chafing and failure followed as per STS Guide 6.6.2.		Previously 8.128

Chapter 8. Cargo and Ballast Systems – LNG

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
8.1	Are the Officers aware of the operator's policy statements, guidance and procedures, including information on maximum loading rates and instructions with regard to safe cargo operations?	Officers aware of the Company's SMS including information on maximum loading rates	Y	Previously 8.1 and 8.2
8.2	Are the Officers aware of any loading limitations for the vessel and are these limitations, if applicable clearly posted in the cargo control area?	Officers aware of any loading limitations and clearly posted in the cargo control area. Pressures at which the relief valves, including those valves fitted in accordance with IGC 8.3, set and stated on the list. A copy of the list should be permanently kept on board by the master.	Y	Previously 8.3
8.3	Are legible and up-to-date pipeline and/or mimic diagrams of cargo, inert gas and venting systems, as applicable, available in the cargo control area and are Deck Officers familiar with the systems?	Deck Officers familiar with the cargo system, operation ongoing and planned sequence of events during the watch.	Y	Previously 8.4
8.4	Has a cargo plan been prepared and followed with a detailed sequence of cargo and ballast transfers documented, stress, intact and damage stability and are any limitations, where applicable, understood by the cargo watch officers and clearly documented?	Cargo operations should be carefully planned and documented well in advance of their execution. Demonstrate that an independent check of the cargo line up done. Cargo log must include any deviations from the original plan.		Previously 8.19 to 8.22
Stability and Cargo Loading Limitations				
8.5	If a loading computer or programme is in use, is it class approved, regularly tested and are Officers aware of the test requirements including damage stability?	Ships constructed on or after 01 Jan 2016* and ships constructed before 01 Jan 2016* (by the first renewal survey on or after 01 Jan 2016, but before 01 Jan 2021**) are required to be fitted with a stability instrument capable of handling both intact and damage stability. (* 01 Jul 2016 and ** 01 Jul 2021 for gas carriers) Master should be supplied with a loading and stability information booklet.	Y	Previously 8.10 and 8.11

		Officers aware of the test requirements including damage stability		
8.6	Is the vessel free of inherent intact stability problems, are Officers aware of these problems or risks of structural damage from sloshing, and actions required if the vessel takes on an unstable condition and/or angle of loll?	If the vessel has inherent intact stability issues or important restrictions other than maximum permitted cargo density, observation will be recorded. Verification of compliance with damage stability requirements be documented as per company's SMS and record retained for minimum 3 years.	Y	Previously 8.9 and 8.12 to 8.15
8.7	Is a Cargo Operations Manual available that covers all cargo operations and are Officers familiar with the manual contents?	Officers familiar with the manual contents. Content of the manuals include recommendation as per IGC 18.2.2	Y	Previously 8.17
8.8	Are all Officers and ratings aware of the carriage requirements including emergency procedures for LNG and are Officers familiar with the vessel's cargo system, including emergency discharge arrangements?	Officers and ratings aware of the LNG emergency procedures and Officer familiar with the emergency discharge arrangements	Y	Previously 8.16 and 8.18
Cargo Operations and Related Safety Management				
8.9	Are cargo operations being carried out and logged in accordance with the plan?	Electronic log accepted.		Previously 8.21
8.10	Are all Officers aware of the emergency procedures for dealing with leakage, spillage or fire involving the cargo?	Contingency plans in accordance with 18.3.1.3, take account of potential local temperature reduction such as when the escaped cargo has reduced to atmospheric pressure and the potential effect of this cooling on hull steel.	Y	Previously 8.22
8.11	Are the Officers aware of the requirement to isolate the electrical supply of the submerged cargo pump motors, where fitted, during gas-freeing operations and are the pumps fitted with an automatic shut-down in the event of low liquid level?	Electric submerged cargo pumps fitted with an automatic shut-down in the event of low liquid level and alarmed at the cargo control station. Officers aware of the requirement.	Y	Previously 8.23
8.12	Are the cargo, ballast and stripping pumps, eductors and their associated instrumentation and controls, where fitted, in good order, free of leaks and is there evidence of regular testing?	System free from leaks, including stripping and eductors		Previously 8.25
8.13	Are cargo pump performance curves available, are Deck Officers aware of the requirements for cargo lines and vapour	Deck Officers aware of the requirements for cargo lines and vapour on the system.	Y	New

	on the system?	Design conditions for piping, piping systems and components, based on the cargoes being carried as per IGC 5.4.2 and 5.4.3.		
8.14	Are the cargo and ballast system valves in good order and is there evidence of regular testing?	Valve closing times periodically checked with manufacturers data		Previously 8.28
8.15	Are the Officers aware of the test requirements for cargo system remote and local tank pressure, temperature, and level sensors and gauges, and are these in good order with evidence of regular testing?	Officers aware of the test requirements. Each cargo tank shall be fitted with liquid level gauging device(s) as per IGC 13.2.1.	Y	Previously 8.29 and 8.30
8.16	Are the Officers aware of the emergency discharge method in the event of cargo pump failure and are there clear procedures addressing this process?	Officers aware of the emergency discharge method and procedures available	Y	Previously 8.31
Cargo Handling and Monitoring Equipment				
8.17	Are tank domes, associated fittings in good order, free from corrosion and leaks?	No gap		Previously 8.32 and 8.33
8.18	Is the insulation on cargo or vapour lines in good order and are inspection routines in place?	Where liquid piping is dismantled regularly, or where liquid leakage may be anticipated, such as at shore connections and at pump seals, protection for the hull beneath shall be provided. A programme should be in place to regularly check and record the condition of the insulation, which include inspect for corrosion under insulation (CUI) to provide an effective sample check.		Previously 8.34 and 8.35
8.19	Are cargo or vapour lines joints electrically bonded?	No gap		Previously 8.36
8.20	Are cargo and vapour line expansion arrangements in good order and liquid/vapour lines free to move inside their clamps?	The preferred method outside the cargo tanks is by means of offsets, bends or loops, but multi-layer bellows may be used if offsets, bends or loops are not practicable.		Previously 8.37 and 8.38
8.21	Are cargo line and system relief valves in good order and are Officers aware of the requirements?	Officers aware of the requirements of cargo line and system relief valves. Short line section of less than 50 litres volume may be exempt from a 'hydrostat' relief valve.	Y	Previously 8.39
8.22	Are cargo pipelines free of screwed-in connections?	No gap		Previously 8.40

8.23	Is the cargo tank high level alarm system independent of both the gauging system and in the case of IGC vessels, also independent of the high level shut-down (overflow control) system and are Officers aware of the override procedures where provided?	A high liquid level alarm and automatic shut-off of cargo tank filling need not be required, when the cargo tank: 1. is a pressure tank with a volume not more than 200 m3; or 2. is designed to withstand the maximum possible pressure during the loading operation, and such pressure is below that of the set pressure of the cargo tank relief valve. Where arrangements are provided for overriding the overflow control system, they shall be such that inadvertent operation is prevented. When this override is operated, continuous visual indication shall be given at the relevant control station(s) and the navigation bridge. (IGC 13.3.7) The system should only be overridden in exceptional circumstances. Officers aware of the override procedures of the cargo tank high level alarm and overflow control system	Y	Previously 8.41, 8.44 and 8.45
8.24	Are there records of the calibration of key cargo instrumentation, including temperature and pressure gauges?	Instruments shall be tested in accordance with manufacturer's recommendations. Calibration carried out at intervals not exceeding 36 months. Comparisons made between local and remote thermometer readings and cross checking with cargo vapour pressure.		Previously 8.42
8.25	Is cargo measurement and custody transfer system in good condition?	Cargo measurement and custody transfer performed such as by, Radar Ullaging Capacitance systems etc. and also by use of float gauges		New
8.26	Are the Officers aware of the test requirements for the cargo tank high level and overflow alarms, and are they in good order with evidence of regular testing and in use for both cargo loading and discharging?	Full loading after delivery and after each dry-docking, testing of high-level alarms shall be conducted by raising the cargo liquid level in the cargo tank to the alarm point. Systems shall be tested prior to cargo operation in accordance with 18.6.2.	Y	Previously 8.43 and 8.44

		Officers aware of the test requirements and evidence of regular testing available.		
LNG Cargo Machinery Rooms				
8.27	Are the bulkhead seals between the, compressor room and the motor room, gas tight and operating effectively?	Alternatively, certified safe electric motors installation complies with the requirements of chapter 10 is acceptable.		Previously 8.47
8.28	Are the cargo machinery rooms well-lit and are electrical fittings suitable for use in gas- hazardous areas and in good order?	No gap		Previously 8.48
8.29	Are Officers aware of the requirements for the compressor room ventilation system and is the system maintaining negative relative pressure?	Fixed artificial ventilation systems capable of being controlled from outside such spaces. For space has an opening into an adjacent more hazardous space or area, it shall be maintained at an overpressure. Officers aware of the requirements for the compressor room ventilation system.	Y	Previously 8.49
8.30	Are the Officers aware of the requirements for airlocks, are the alarms in good order and in the event of pressure in the air-lock lost, will the shutdown system operate correctly?	In ships carrying flammable products, electrical equipment that is located in spaces protected by airlocks and not of the certified safe type, shall be de-energized in case of loss of overpressure in the space. Officers aware of the requirements for the airlocks and shutdown system operate correctly.	Y	Previously 8.50 and 8.51
8.31	Is the compressor room free of gas leaks?	No gap		Previously 8.52
8.32	Are the Officers familiar with the operation and requirements of the fixed gas detection equipment and is the equipment in good order?	Alarms shall be activated when the vapour concentration by volume reaches the equivalent of 30% LFL in air. For membrane containment systems, the primary and secondary insulation spaces shall be able to be inerted and their gas content analysed individually. Officers familiar with the operation and requirements of fixed gas	Y	Previously 8.53 and 8.62

		detection equipment.		
8.33	Are the Officers aware of the requirements for setting fixed gas detector sample points and, are they fitted at the upper level of the machinery spaces?	The number and the positions of detection heads is determined by the size and layout of the compartment, the compositions and densities of the products carried and the dilution from compartment purging or ventilation and stagnant areas. Officers aware of the requirements for setting fixed gas detector sample points.	Y	Previously 8.54
Cargo Reliquefaction Systems				
8.34	If applicable, are the Officers familiar with the operation of the cargo reliquefaction plant and is the plant and associated machinery and instrumentation in good order?	Officers familiar with the operation cargo reliquefaction plant, machinery and instrumentation	Y	Previously 8.55
8.35	Are the Officers aware if the Gas supply to the Engine Room is unaffected by ESD Shutdown and are there procedures confirming this?	There are procedures for continuing gas supply to ER and Officers are aware	Y	Previously 8.57
8.36	Is the reliquefaction plant fitted with an independent emergency shutdown control to the cargo ESD system.	Auxiliary systems for conditioning the cargo that use toxic or flammable liquids or vapours shall be treated as cargo systems for the purposes of ESD.		Previously 8.58
Gas Combustion Systems				
8.37	Are the Officers aware of the operation of the GCU unit where fitted and is the unit in fully operational and ready for immediate use?	An automatic system shall be fitted to change over from gas fuel operation to oil fuel operation without interruption of the boiler firing, in the event of loss of gas fuel supply. Officers aware of the operation of the GCU unit.	Y	Previously 8.59 and 8.61
8.38	Are the alarms associated with the GCU tested in accordance with the Planned Maintenance System?	No gap		Previously 8.60
8.39	Are the Officers aware of the gas fuel piping protection and is the system in good order?	The routeing of the pipeline shall take into account potential hazards, due to mechanical damage, in areas such as stores or machinery handling areas. Provision shall be made for inerting and gas-freeing that portion of the gas fuel piping systems located in	Y	Previously 8.63

		the machinery space. Officers aware of the gas fuel piping protection.		
8.40	Is the automatic gas shut-off system in good order and regularly tested?	The fuel supply equipment shall be automatically stopped in the case of low suction pressure or fire detection.		Previously 8.64
Void and Interbarrier Spaces and Seals				
8.41	Is the interbarrier space nitrogen purging system in good order?	Sweeping valves always in closed position when not in use for purging.		Previously 8.67
8.42	Is the pressure in the interbarrier spaces being maintained at a sufficient level to prevent ingress from the atmosphere?	Visual inspection or a pressure/vacuum test or other suitable means carried out as per the periodical check procedure.		Previously 8.68
8.43	Are Officers aware of the setting requirements for relief valves for hold spaces and primary and secondary barriers and, where fitted are they in good order?	Interbarrier spaces shall be provided with pressure relief devices. Officers aware of the setting requirements for relief valves.	Y	Previously 8.69
8.44	Are the Officers familiar with the means to sample for ingress of water into the insulation spaces and are checks being recorded?	Means of detecting any leakage shall be provided. (IGC 3.7.1 and 3.7.2) Officers familiar with the means to sample for ingress of water.	Y	Previously 8.70
8.45	Is the glycol heating system in the void spaces between cargo tanks, where fitted, in good order?	No gap		Previously 8.71
Inert Gas Systems				
8.46	Is the inert gas system and/or storage and associated pipework, where fitted, in good order?	Interbarrier and hold spaces shall be suitable inerted and sufficient for at least 30 days.		Previously 8.72
8.47	Are Officers aware of the arrangements to prevent the backflow of cargo vapour into the inert gas system and is this arrangement in place?	Plants located in machinery spaces or other spaces outside the cargo area, two non-return valves or equivalent devices and, in addition, a removable spool piece shall be fitted in the inert gas main in the cargo area. When not in use, the inert gas system shall be made separate from the cargo system in the cargo area except for connections to the hold spaces or interbarrier spaces. Officers aware of the arrangements to prevent the backflow of cargo	Y	Previously 8.73

		vapour and arrangement in place		
Pressure Relief and Venting Systems				
8.48	Are the Officers aware of the requirements for setting the relief valves, are certificates of test available and clear procedures for changing MARVS as applicable?	Cargo tanks, including deck tanks, shall be fitted with a minimum of two pressure relief valves (PRVs) as per IGC 8.2.1. The setting of the PRVs shall not be higher than the vapour pressure that has been used in the design of the tank. Where two or more PRVs are fitted, valves comprising not more than 50% of the total relieving capacity may be set at a pressure up to 5% above MARVS to allow sequential lifting, minimizing unnecessary release of vapour. Officers responsible clearly understand the procedures for changing settings.	Y	Previously 8.74 and 8.75
8.49	Are the Officers familiar with the vent outlet arrangements and, as fitted are protective or flame screens in good order and regularly inspected?	Protection screens of not more than 13 mm square mesh. Officers familiar with the vent outlet arrangements.	Y	Previously 8.76
8.50	Where the pressure relief line vents directly through a mast riser, does this system have a liquid sensor?	Means shall be provided to prevent liquid overflow from vent mast outlets. Where required to prevent overpressure in downstream piping, relief valves on cargo pumps shall discharge to the pump suction.		Previously 8.77
8.51	Are Officers familiar with the operation of any fixed fire extinguishing systems on the vent masts, where fitted, and are the systems in good order and operational?	If and where fitted these should be in good order and clearly identified. Officers familiar with the operation.	Y	Previously 8.78
8.52	Is the forward mast vent always operated in automatic mode?	If fitted. No gap.		Previously 8.79
8.53	Are the Officers familiar with the procedures and authorisation for changing settings and inhibiting alarms?	Where provided for overriding the overflow control system, they shall be such that inadvertent operation is prevented. When this override is operated, continuous visual indication shall be given at the relevant control station(s) and the navigation bridge. Officers familiar with the	Y	Previously 8.80

		procedures and authorisation.		
Emergency Shut Down (ESD) System				
8.54	Are Officers familiar with the operation of the Emergency Shut Down (ESD) system, and is the system regularly tested operational?	Provisions shall be made to handle trapped liquid should the ESD valve close while the manual valve is also closed. The ESD control system shall be configured so as to enable the high-level testing required in 13.3.5 to be carried out in a safe and controlled manner. Officers familiar with the operation of the ESD system and regularly tested	Y	Previously 8.82 and 8.83
8.55	Are personnel aware of the locations of ESD points, and auxiliary equipment shut down requirements?	One ESD valve shall be provided at each manifold connection. As a minimum, the ESD system shall be capable of manual operation by a single control on the bridge and either in the control position required by 13.1.2 or the cargo control room. Cargo machinery that is running shall be stopped by activation of the ESD system. Personnel aware of the locations of ESD points, and auxiliary equipment shut down requirements	Y	Previously 8.84
8.56	Are the Officers aware of the requirements for the closing of the manifold valves and tank filling valves, if they form part of the emergency shutdown system, and are they tested and timed to close within 30 seconds?	If the cargo tank MARVS exceeds 0.07 MPa, an additional manual valve shall be provided for each transfer connection in use. Officers aware of the requirements for the closing of the manifold valves and tank filling valves.	Y	Previously 8.87
8.57	Are Officers aware of the requirements of fusible plugs, and are they fitted on the liquid domes, in the vicinity of the manifolds and in good order?	The ESD system shall be automatically activated on detection of a fire on the weather decks of the cargo area and/or cargo machinery spaces. Detection may be by means of fusible elements. Officers aware of the requirements of fusible plugs	Y	Previously 8.88

8.58	If the vessel is fitted with a reliquefaction plant, will this be tripped in the event of activation of the ESD?	No gap		Previously 8.89
8.59	Are the Officers aware of the secondary tank pressure management system in use at sea and if it is sufficient to handle the gas volume in the event of a shutdown of the reliquefaction system?	Officers aware of the secondary tank pressure management system	Y	Previously 8.90
8.60	Are the Officers fully familiar with the override procedure for the alarms and ESD trips?	If provided, arrangement for inadvertent operation is prevented. When operated, continuous visual indication at the relevant control station(s) and the navigation bridge. Officers fully familiar with the override procedure	Y	Previously 8.91
Manifold Arrangements				
8.61	Are the manifolds and associated valves in good order, blank flanges of an equivalent rating to that of the pipelines and pressure gauges securely fitted outboard of the manifold valves on both sides and monitored for leakage?	Bow or stern loading and unloading lines that are led past accommodation spaces, service spaces or control stations shall not be used for the transfer of products requiring a type 1G ship. Bow or stern loading and unloading lines shall not be used for the transfer of toxic products as specified in 1.2.53, where the design pressure is above 2.5 MPa.		Previously 8.92, 8.96, 8.99, 8.100 and 8.101
8.62	Does the manifold arrangement provide for safe access for connection and disconnection of cargo lines and visible restricted access to the manifolds during cargo operations?	No gap		Previously 8.93 to 8.95
8.63	Is there clear evidence of offshore manifolds regularly checked during cargo transfer for manifold valve leakage?	No gap		Previously 8.97
8.64	Are all flange connections fully bolted?	No gap		Previously 8.98
8.65	Are Officers aware of the procedures for the use of manifold strainers, and where fitted are the strainers not being by-passed?	Where fitted strainers must be in good order and frequently checked and cleaned as required. Many strainers are designed for one-way flow only. Officers aware of the procedures for the use of manifold strainers.	Y	Previously 8.102
8.66	Are LNG spill arrangements adequate?	Cargo temperatures below -110°C, a low-pressure water curtain for protection of the hull steel. The water curtain should be used		Previously 8.103

		whenever the transfer lines contain LNG.		
8.67	Are Liquid Spill and Manifold Drip tray arrangements adequate?	No gap		Previously 8.106
8.68	During the disconnection of the loading arms are the crew aware of the hazards related to the purging of liquid from the arms via the drain cocks?	No gap		Previously 8.107
Safety Equipment				
8.69	Are crew members aware of the requirements for the use of protective equipment and is there suitable protective equipment available and in use for all crew members engaged in cargo operations?	Suitable protective equipment taking into account the characteristics of the products being carried. And shall be kept in suitable, clearly marked lockers located in readily accessible places. Crew members aware of the requirements for the use of protective equipment	Y	Previously 8.108
8.70	Are the Officers familiar with the requirements for provision of safety equipment onboard, is the safety equipment in good order and are Officers capable of donning the equipment satisfactorily?	The safety equipment shall take into account the nature of the cargoes, listed on the International Certificate of Fitness. The equipment complies with the requirement of IGC 14.1.2 and 14.1.3. Officers familiar with the requirements for provision of safety equipment onboard and capable of donning the equipment satisfactorily.	Y	Previously 8.109
8.71	If the vessel has a cargo capacity greater than 5,000 m3, is the additional firemen's outfit carried?	No gap		Previously 8.110
8.72	Are Officers aware of the operation of the chemical dry powder system, and is the system in good order?	On a two-yearly basis a sample of dry powder shall be subject to test for moisture content. Officers aware of the operation of the chemical dry powder system.	Y	Previously 8.114
8.73	Are the Officers aware of the maintenance requirements for the water spray system and is the system in good order?	Water-spray system for cooling includes all exposed emergency shut-down (ESD) valves and exposed lifeboats, liferafts and muster stations facing the cargo area, regardless of distance to cargo area. Officers aware of the maintenance	Y	Previously 8.115

		requirements for the water spray system		
8.74	Are the Officers familiar with the fixed fire extinguishing systems installed within enclosed spaces containing cargo handling equipment?	Enclosed spaces where cargo compressors or pumps, cargo processing units, are located, including those supplying gas fuel to the engine-room, and the cargo motor room within the cargo area of any ship, shall be provided with a fixed fire-extinguishing system complying with the provisions of the FSS Code and taking into account the necessary concentrations/application rate required for extinguishing gas fires. Officers familiar with the fixed fire extinguishing systems installed	Y	Previously 8.116
Cargo Hoses				
8.75	If the vessel uses its own cargo hoses, are they in good order, pressure tested to their design working pressure and is a record of all hose tests and inspections maintained on board?	Original hose certificates available onboard including the test data and compatibility data for use with the existing cargo. Cryogenic hoses can only be safely tested under controlled conditions ashore which may include liquid nitrogen as the test medium.		Previously 8.117 to 8.119
Cargo Lifting Equipment				
8.76	Are all cranes and other lifting equipment properly marked, regularly inspected, tested and are the vessel's crew aware of maintenance requirements?	Vessels with a single hose crane, must have sufficient spare hoses to replace any defective hose. Monitoring the wear of a slew bearing on cranes conducted as per bearing manufacturer recommendations. Vessel's crew aware of lifting equipment maintenance requirements.	Y	Previously 8.120
Ship to Ship Transfer Operations				
8.77	Are operator's procedures provided for ship-to-ship operations and equipment approved for LNG transfer?	Procedures should follow the recommendations of the OCIMF/ICS STS Transfer Guide (Liquefied Gases).		Previously 8.122 and 8.123
8.78	Are the Officers and crew familiar with the requirements and risks during ship-to-ship operations?	Officers and crew familiar with the requirements and risks. A risk assessment for STS transfer location and the STS operation. (STS Guide 1.4)	Y	New

		Conducted under the co-ordination and advisory control of either Masters, an STS Superintendent or the POAC. And may be formally transferred to another suitably qualified person during extended operations (STS Guide 1.5.1). Procedures to monitor and assess permanent fenders and hoses.		
8.79	Does the POAC have the necessary qualifications and experience and are Officers aware of these requirements?	POAC have the necessary qualifications and experience for transfers involving MARPOL Annex I cargoes. For transfers involving cargoes other than MARPOL Annex I cargoes, STS Superintendent has similar qualification and experience as POAC, as well as with the type of cargo transferred. Officers aware of these requirements.		New
8.80	Are Officers aware of the requirements of the ship-to-ship transfer checklists and are there records of STS operations maintained?	Officers aware of the requirements of the STS checklists and STS records maintained as per recommendations and include post feedback/ assessment by the Master. Past records checked for compliance.	Y	Previously 8.125
8.81	If a ship-to-ship transfer was in progress during the inspection, was it conducted in accordance with the recommendations of the OCIMF/ICS STS Transfer Guide?	STS Guide 3.10.4 followed as precaution against incendive arcing between the two ships when presenting the hose string for connection. Protection against synthetic mooring line chafing and failure followed as per STS Guide 6.6.2.		Previously 8.126

Chapter 9. Mooring

No	Question Text	Gap	Crew-Comp	Mapping
Mooring equipment documentation and management				
9.1-	Are certificates available for all mooring lines and wires?	Mooring line and tail certificates should follow the guidance for the purchasing and testing of mooring lines and tails as provided in Appendix B of MEG4		No change
9.2-	Does the ship have a Mooring System Management Plan?	Mooring Equipment Passport and Line Management Plan. The objective for the MSMP is to ensure that all assessed risks are effectively managed through the design and operation of the mooring system. Its aim is to ensure that during mooring operations, no harm comes to ship or terminal staff or damage to the ship or terminal/facility.		New
9.3-	Does the ship have a Line Management Plan?	Guideline as per MEG4 and included in the Company's SMS. To reduce unnecessary degradation of the lines and ensure lines are operated within safety margins over their service life, it is recommended that ship operators develop a programme for line maintenance, inspection, retirement and end-to-end policy.		New

9.4-	Have the operator's policies on line inspections, retirement and wear zone management been implemented as outlined in the Line Management Plan?	Inspection procedures should be as per line manufacturers and the frequency of inspections should be based on several factors such as mooring frequency, severity of loading conditions and consistency of line configuration		No change
9.5-	Do all mooring lines and where fitted, mooring tails, meet industry guidelines?	Meeting industry guidelines		Previously 9.2
9.6-	If one or more bow stoppers are fitted is a certificate attesting to the safe working load provided?	No gap		Previously 9.3
9.7-	Is there a policy in place for the testing of winch brakes and are the results recorded?	The main purpose of brake testing is to verify that the brake will render at a load less than the ship design MBL		Previously 9.5
Mooring procedures				
9.8-	Are moorings satisfactorily deployed and tended?	Permanently marking snap-back danger zones on the deck is not recommended. Instead it is recommended that the entire area of the mooring deck is considered an area of elevated risk, particularly from snap-back, and that personnel are made aware when they are entering this elevated risk area.		Previously 9.6
9.9-	Are mooring lines secured to bitts and turned up correctly?	No gap		Previously 9.7
9.10-	Are all powered mooring lines correctly reeled on drums, secured on brakes and winches out of gear.	No gap		Previously 9.8
9.11-	On split drum winches are all the lines made fast with no more than one layer on each tension side of the drum?	Guidance on the minimum number of turns should be		Previously 9.9

		obtained from the line manufacturer and documented in the Line Management Plan. If guidance is not available, a minimum of eight turns should be used		
9.12-	If mooring tails are fitted to wires or HMSF lines, do they have proper connections and are they correctly fitted?	Include HMSF lines for mooring tails. The SWL of joining shackles should always be equal to, or greater than, the WLL of the lines in the mooring system, so that the SWL will never be exceeded within the working load range of the lines to which they are attached.		Previously 9.10
9.13-	Are all mooring lines stowed neatly to minimise tripping hazards and are mooring areas clear and unobstructed?	No gap		Previously 9.11
Mooring equipment				
9.14-	Are mooring winches, including winch foundations in good order?	No gap		Previously 9.12
9.15-	Do brake linings, drums and pins appear to be in good order?	No gap		Previously 9.13
9.16-	If mooring winches in a gas hazardous area are electrically powered, are motors Ex'd' rated and have insulation tests been carried out and the results recorded.	No gap		Previously 9.14
9.17-	Are mooring wires, lines, synthetic tails and connecting apparatus in good order?	Splices and repairs should be made in strict accordance with the manufacturer's instructions and performed by a competent person. Lubricant used for maintenance of wires should be environmentally friendly		Previously 9.15

9.18-	Are pedestal fairleads, roller fairleads and other rollers well-greased and free to turn and are bitts and chocks free of grooving?	Chocks and fittings should be such to prevent damage to fibre ropes from abrasion or cutting		Previously 9.16
9.19-	Is mooring equipment marked with its SWL?	The SWL of the fitting should be equal to or greater than the ship design MBL		Previously 9.17
Anchoring equipment				
9.20-	Are windlasses, anchors, locking bars and cables in good order and operating effectively?	No gap		Previously 9.18
9.21-	Except whilst alongside, when locking bars should be in place, were the anchors cleared and ready for immediate use during port entry?	Anchors not in use should be properly secured with the brake and locking bar		Previously 9.19
9.22-	Are bitter end securing arrangements unobstructed and outside the chain locker?	No gap		Previously 9.20
9.23-	Are the chain locker doors securely battened down?	No gap		Previously 9.21
9.24-	Is the crew aware of the design limitations of their anchor windlass and systems?	Crew should be familiar with all manufacturer equipment and operation manuals and understand the design/operating limitations of windlasses fitted		New
Single Point Moorings				
9.25-	Is single point mooring (SPM) and associated equipment fitted to OCIMF recommendations?	No gap	Y	Previously 9.22
9.26-	If the vessel is equipped for mooring at single point moorings, does it meet the recommendations as applicable, contained in Mooring Equipment Guidelines?	Winch storage drums used to recover the pick-up lines should be positioned in a direct straight lead with the bow fairlead and bow chain stopper without the use of pedestal rollers. Where mooring arrangement design doesn't permit direct lead, not more than two pedestal rollers are permitted.		Previously 9.23

9.27-	If the vessel is fitted with a hydraulically operated bow stopper, are safeguards provided to prevent its accidental release?	No gap		Previously 9.24
Emergency Towing Arrangements				
9.28-	Are emergency towing arrangements readily available for deployment at both ends of the vessel?	No gap Reference MSC 35(63)		Previously 9.25
9.29-	Does the vessel have on board Emergency Towing Procedures?	No gap		Previously 9.26

Chapter 10. Engine and Steering Compartments

No	Question Text	Gap	Crew-Comp	Mapping
Policies, Procedures and Documentation				
10.1-	Are the engineers aware of the procedures for safe operation of the machinery plant including their duties and watch standing instructions as per the Company SMS and are these instructions clearly defined?	Engineers aware of the procedures for safe operation of the machinery plant	Y	Merger of 11.1 and 11.2
10.2-	If the machinery space is certified for unmanned operation, is it being safely operated in that mode without regular alarms occurring under normal conditions?	Unmanned operation without regular alarms occurring under normal conditions. If the vessel's machinery space is manned due to operational reasons (manoeuvring, transiting piracy areas etc) then observations should not be raised unless there are insufficient crew or defective equipment.		Previously 11.3
10.3-	Are the engineers demonstrating knowledge and understanding of the Chief Engineer's standing orders and instructions and are the standing orders posted and signed by all engineers?	Engineers demonstrate knowledge and understanding of the Chief Engineer standing orders and instructions and it is posted. Night orders should be written to supplement the standing orders during periods of manned E/R. For periods of UMS, night orders will not generally be required.	Y	Previously 11.5
10.4-	Are the engineers familiar with safe entry requirements to the machinery space when operating in the UMS mode, especially with regards to use of the dead man alarm where fitted?	Engineers familiar with machinery space entry requirement and dead man alarm. Safe entry requirements should be clearly posted at the normally accessible entrance to the machinery space	Y	Merger of 11.6 and 11.7

		including the requirements to use the dead man alarm. Engineers alarm should operate if the machinery alarm is not acknowledged in machinery spaces or control room.		
10.5-	Are engineers aware of the entries required in the engine room log book, and are the entries clear, comprehensive and adequately maintained?	Engineers aware of the log book entries required and entries clear and comprehensive. Entries in engine log book to include Fuel and lube oil ROB's, Changeover fuel / entering ECA, Machinery operating parameters (RPM, load, temperature and pressures). Errors made in the log should be struck through with a single line and initialled and dated. Chief engineers to sign on a daily basis.	Y	Previously 11.8
10.6-	Can the engine room staff demonstrate full knowledge of essential emergency equipment and are instructions clearly posted on site for safe operation?	Engine room staff demonstrate full knowledge and instructions clearly posted. Use of photographs to supplement start up procedures has proven to be a very effective way of explaining systems.	Y	Previously 11.9
10.7-	Does the operator subscribe to a fuel, lube and hydraulic oil testing programme on a frequency in accordance with the manufacturer's recommendations and are there procedures to act on these results?	Fuel, lube and hydraulic oil testing programme on a frequency in accordance with the manufacturers recommendations. Recommendations of the lube oil analysis should be followed and there must be		Previously 11.10

		evidence to show this as undertaken. Observations shall be raised for any "critical" (red status) condition regardless of actions taken.		
10.8-	Are the vessel's staff engaged in bunkering operations well aware of safe transfer requirements and are detailed bunker transfer instructions available?	Staff engaged in bunkering operations well aware of safe transfer requirements. The Company should consider following in bunkering procedures -Establishing maximum loading volume for all tanks -Special precautions when loading into double bottom tanks -Communications with the bunker supplier prior to commencement, to establish and record the loading procedure to be followed and to determine how quantity and quality checks may be carried out, particularly if safe access is needed between the ship and a barge - Monitoring of the bunkering operation and checking it conforms to the agreed procedure Bunker fuel tanks should be monitored prior to, during and after bunkering. If H2S has been detected, the bunker tank should be periodically tested.	Y	Previously 11.11
10.9-	Are the engineers aware of the requirements for vessels operating within an ECA and are there clear procedures available regarding use of low sulphur fuels in boilers, main plant and auxiliary engines?	Engineers aware of the requirements for operating in ECA and clear procedures for the use inclusive main	Y	Previously 11.12

		plant and auxiliary engines. Evidence in the form of a Statement of Compliance issued by Class and/or Manufacturers documentation must be provided on-board to verify that the vessel can safely operate on low sulphur fuels in the ECA areas		
10.10-	Are the engineers aware of the requirements and precautions necessary to control the change from residual to low-sulphur fuels and are these requirements posted?	Engineers aware of the fuel changeover requirements and precautions, and it is posted. Hazard Identification (HAZID) Assessment should be performed The procedures should include: • Instructions on when to initiate the fuel changeover operation. • The sequence of valve operation during the fuel changeover process. • Advice and guidance on any associated issues that could be a consequence of the fuel changeover operation.	Y	Previously 11.13
10.11-	If the vessel is fitted with a class approved Exhaust Gas Cleaning System are the Officers familiar with the system and safety requirements and are these documented?	Officers familiar with the Exhaust Gas Cleaning System and it is documented. Robust procedures and crew training for use of EGCS	Y	New
Planned Maintenance				
10.12-	Are the Officers familiar with the planned maintenance system and is the system being followed and maintained up to date?	Officers familiar with PMS system and maintained up to date	Y	Previously 11.14

10.13-	Is a ship-specific list of critical equipment defined and available on board and highlighted in the PMS? Are there measures in place to ensure that defined critical spare parts are available on board?	Defining ship-specific critical equipment and critical spare parts. A minimum level of critical spare parts to be established for the vessel based on a risk assessment.		Previously 11.15
Safety Management				
10.14-	Is an engineer's call alarm fitted and is it in good order and tested regularly and the results recorded?	No gap		Previously 11.16
10.15-	Are all areas of the machinery space well illuminated, emergency escape routes clearly marked, unobstructed and are ship's crew familiar with the escape routes?	Ship's crew familiar with escape routes and it is well illuminated. SOLAS II-2 requirements of inclined ladder and two means of escape from the main workshop within a machinery space for ships constructed on or after 1 January 2016	Y	Merger of 11.17 and 11.18
10.16-	Are engineers aware of the testing requirements and able to demonstrate familiarity with the procedure for testing of emergency equipment?	Where fitted, the APS (Alternative Propulsion System) should be periodically tested in accordance with class and PMS requirements. Engineers aware of the testing requirement and able to demonstrate familiarity.	Y	Previously 11.19
10.17-	Are engineers aware of the operation of the machinery space liquid fuel system remote closing valves, and are the closing devices regularly tested and in good order?	Engineers aware of the operation of the machinery space fuel system remote closing valves. Inspectors should witness the test of the quick closing valve for the emergency generator where permitted.	Y	Previously 11.20
Fire Fighting Equipment				

10.18-	Are Officers aware of the location of the accommodation and engine room ventilation fan emergency stops, are they clearly marked to indicate the spaces they serve and is there evidence of regular testing and maintenance?	Officers aware of the location of the accommodation ventilation fans emergency stop and clearly marked to indicate spaces they serve	Y	Previously 11.21
10.19-	Are diesel engine fuel delivery pipes adequately jacketed or screened, exhaust lines and hot surfaces protected from spray and surrounding areas free from fuel or lube oil leakage?	No gap		Merger of 11.22, 11.23 and 11.24
10.20-	Are purifier rooms and fuel and lubricating oil handling areas ventilated and clean?	No gap		Previously 11.25
10.21-	If the vessel class notation allows UMS operation, are main engine bearing temperature monitors, or the crankcase oil mist detector, in good order?	Testing of the detector alarm in accordance with manufacturer's instructions.		Previously 11.26
10.22-	Where hydraulic aggregate pumps are located within the main engine compartment, is an oil mist detector fitted?	The interpretation of a fully segregated compartment is one to prevent hydraulic vapours/mist from easy reach of an adjacent or hazardous space and ignition source and should be insulated with a fire retardant putty or similar material.		Previously 11.27
10.23-	Are the main switchboard, alternators and other electrical equipment satisfactorily protected from water spray?	Electrical equipment intended for exposure to wetness, will be constructed to an ingress protection "IP" rating e.g. IP65.		Previously 11.28
10.24-	Is deck insulation provided to the front and rear of medium power (i.e. 220V and above) electrical switchboards and is it in good order?	Insulation matting should conform to a minimum 1000V (depending on the system) - European Standard IEC:61111:2009 or equivalent.		Previously 11.29
10.25-	Are gauge glass closing devices on oil tanks of a self-closing, fail-safe type and not inhibited?	No gap		Previously 11.30
10.26-	Are self-closing sounding devices to double bottom tanks in good order and closed?	No gap		Previously 11.31

10.27-	Is all moving machinery provided with effective guards and adequate eye protection available?	No machine should be used when a guard or safety device is missing, incorrectly adjusted or defective, or when it is itself in any way faulty. If any defect is identified, the machine should be isolated from its power source until it has been repaired.		Merger of 11.32 and 11.33
10.28-	Are records maintained for the regular inspection and testing of lifting devices and loose gear?	Loose gear includes chain blocks, strops, slings and shackles, chain, hooks, connecting links, turnbuckles, binders, sheave blocks, and swivels used in an assembly to suspend, secure, or lift a load.		Merger of 11.34 and 11.35
10.29-	Are machinery spaces and steering compartments clean and free from obvious leaks and is the overall standard of housekeeping and fabric maintenance satisfactory?	Said spaces free of oil, rubbish and sediment, which include the bilges.		Previously 11.37
10.30-	Is the bilge high level alarm system regularly tested and are records maintained?	No gap		Previously 11.39
10.31-	Are seawater pumps, sea chests and associated pipework in good order and free of hard rust and temporary repairs, particularly outboard of the ship-side valves?	Straub couplings are not acceptable as a permanent repair except where fitted as part of an original design system.		Previously 11.40
Machinery Status				
10.32-	Are the following, where applicable, all in good order and do they appear to be well maintained?	No gap		Previously 11.41
10.33-	Are engineers familiar with the procedure for taking over the controls for manoeuvring the vessel from the bridge in an emergency?	No gap		Previously 11.42
10.34-	Are Officers fully familiar with all starting procedures for the emergency generator and are these procedures clearly and displayed?	Officers fully familiar with all starting procedures for emergency generator and these procedures clear. Emergency Generator	Y	Previously 11.43

		is tested, provided it is safe to do so.		
10.35-	Is the emergency generator reserve fuel tank provided with sufficient fuel?	No gap		Previously 11.44
10.36-	Where an emergency generator is not fitted, are engine room emergency batteries in good order and fully charged?	No accumulator battery installed in the same space as the emergency switchboard. An indicator shall be mounted on the main switchboard or in the machinery control room to indicate when the batteries constituting either the emergency source of electrical power or the transitional source of electrical power.		Previously 11.45
10.37-	Is all electrical equipment including junction boxes and cable runs in good order?	No gap		Previously 11.46
10.38-	Are switchboards free of significant earth faults?	No gap		Previously 11.47
Steering Compartment				
10.39-	Are the Officers aware of the test requirements for the steering gear both pre-departure and for emergency steering drills and have these tests been conducted satisfactorily with operating instructions clearly posted?	Officers aware of the test requirements for the steering gear both pre-departure and for emergency steering drills. The ship's steering gear shall be checked and tested within 12 hours before departure, except ships which regularly engage on voyages of short duration (checks and tests at least once every week). Drills shall take into consideration the manning levels required to operate the emergency steering satisfactorily.	Y	Merger of 11.48, 11.49 and 11.50

10.40-	Is the steering gear emergency reserve tank fully charged?	No gap		Previously 11.51
10.41-	Are the arrangements for the provision of communications with the wheelhouse and heading and rudder indication in good order?	Communications arrangement in good order		Merger of 11.52, 11.53 and 11.54
10.42-	Is access to steering gear unobstructed?	No gap		Previously 11.55
10.43-	Is the steering compartment fitted with suitable handrails, gratings or other non-slip surfaces?	No gap		Previously 11.56
10.44-	Are the Officers and crew aware of the safe operating requirements of any watertight doors fitted?	Officers and crew aware of the safe operating requirement of watertight doors. Drills for the operating of watertight doors, side scuttles, valves and closing mechanisms of scuppers, ash-chutes and rubbish-chutes shall take place weekly and entered in the logbook. All power-operated sliding watertight doors shall be provided with means of indication which will show at all remote operating positions whether the doors are open or closed.	Y	New
LNG Bunkering Operations				
10.45-	Are detailed LNG bunkering and fuel handling instructions/manual available?	SMS should include detailed guidelines and instructions as well as checklists covering the planning, pre-bunkering, bunkering and post-bunkering stages of the operation including a suitably detailed fuel handling manual. Guidelines/instructions should include gas-up, cool-down, loading, vapour management,		New

		tank management, gas freeing and purging operations.		
10.46-	Are risk assessments for LNG bunkering completed and available?	Risk assessment for LNG bunkering conducted to ensure that risks arising from the use of low-flashpoint fuels affecting persons on board, the environment, the structural strength or the integrity of the ship are addressed. Consideration shall be given to the hazards associated with physical layout, operation and maintenance, following any reasonably foreseeable failure. The risks shall be analysed using acceptable and recognized risk analysis techniques, and loss of function, component damage, fire, explosion and electric shock shall as a minimum be considered.		New
10.47-	Are pre-bunkering checklists and verifications appropriately completed and carried out?	Records and documentation for LNG bunkering in either electronic or hard copy form should be available for review. Pre-bunkering verification carried out and checklists completed.		New
10.48-	Does the vessel have appropriate emergency response plan and PPE relevant to LNG bunker operations?	Emergency procedure includes response plan		New

		provided. All staff engaged in duties or working in the vicinity of the operations shall wear appropriate PPE for LNG bunkering operations.		
10.49-	Does the vessel have an established emergency bunkering shut-down procedure which is agreed upon with the personnel from the supply facility and is tested prior commencement of operations?	The fuel handling manual shall include guidance on emergency shutdown and emergency release systems, where fitted. An audible and visual alarm and emergency shutdown provided at the bunkering control location. (IGF 15.5.3) A manually operated stop valve and a remote operated shutdown valve in series, or a combined manually operated and remote valve shall be fitted in every bunkering line close to the connecting point. It shall be possible to operate the remote valve in the control location for bunkering operations and/or from another safe location.		New
10.50-	Is information on loading limitations for the LNG fuel tanks available?	A loading limit curve for actual fuel loading temperatures shall be available considering that no storage fuel tanks should be filled more than 98% liquid full at the reference temperature. (IGF 6.8.1) Special considerations		New

		may be made to allow a higher loading limit than calculated using the reference temperature, but never above 95%.		
10.51-	Are the appropriate ship's personnel trained and certified in bunkering operations involving LNG as a marine fuel?	Ship's personnel trained and certified in LNG bunkering operations appropriate to the capacity to be filled and duties and responsibilities to be taken up, taking into account the provisions given in the STCW Convention and Code, as amended. (IGF 19.2) The ship's guidelines should specify a dedicated person-in-charge (PIC) who will be in overall control of the operation. The PIC should have adequate education, training and authorisation to ensure safe bunkering operations. (IGF 18.4.1.1)	Y	New
10.52-	Are visible means provided to restrict access to the bunker manifold area during operations?	Warning signs shall be posted at the access points to the bunkering area and shall be limited to essential staff only.		New
10.53-	Are permanent fixed gas detection and alarms fitted at appropriate LNG bunkering manifold and vent areas and other required locations?	Bunkering stations that are not located on open deck shall be suitably ventilated Fixed gas detection and alarms at LNG bunkering manifold and vent areas as per IGF 13.7 Audible and visible alarms from the gas detection equipment shall be located on the navigation bridge or in		New

		the continuously manned central control station.		

Chapter 11. General Appearance and Condition

No	Question Text	Gap	Crew-Comp	Mapping
Hull, superstructure and external weather decks				
11.1-	Is the general condition, visual appearance and cleanliness of the hull satisfactory?	The assessment of coating condition should be based on the guidance as per RESOLUTION MSC.261(84) – Good, Fair, Poor.		Previously 12.1
11.2-	Are hull markings clearly indicated and correctly placed?	No gap		Previously 12.2
11.3-	Is the general condition, visual appearance and cleanliness of the weather decks satisfactory and are deck working areas clearly identified and provided with non-slip surfaces?	Deck working area provided with non-slip surfaces		Merger of 12.3 and 12.4
11.4-	Is the general condition of service pipework satisfactory and is it free from significant corrosion and pitting and soft patches or other temporary repairs?	Inspection includes electrical conduits, fresh water lines etc. Where deck cargo lines are insulated, the physical condition of the insulating material shall be assessed. Where sliding feet are fitted on deck cargo lines, such sliding feet to be checked.		Previously 12.5
11.5-	Are pipe stands, clamps, supports and expansion arrangements satisfactory?	Particular care should be taken in areas of piping permanently protected by insulation and there should be a maintenance plan in place.		Previously 12.6
11.6-	Are all deck openings, including weathertight doors, bridge windows and portholes, in good order and capable of being properly secured?	Inclusive bridge windows in good order and capable of being properly secured.		Previously 12.7

11.7-	Are fuel, ballast and other space vents and air pipes in good order and does visual evidence indicate regular maintenance?	Vents and airpipes should be clearly marked to indicate the space they serve. There is no requirement for ballast tank vents to be fitted with flame screens.		Previously 12.8
11.8-	Is the general condition, visual appearance and cleanliness of the superstructure satisfactory?	Monkey island fittings should be checked for condition including the mast stays properly secured, magnetic compass binnacle and aerials and supporting brackets in good order.		Previously 12.10
Electrical Equipment				
11.9-	Are the deck lights all operational and sufficient in number and range to illuminate the deck to facilitate safe working during darkness?	The deck lighting should be tested even if in daylight to ensure the system is operative and no significant earths on the switchboards.		Previously 12.11
11.10-	Is the general condition of electrical equipment, including conduits and wiring, satisfactory?	No gap		Previously 12.12
11.11-	Are light fittings in gas-hazardous areas Ex'd' rated and in good order?	No gap		Previously 12.13
Internal Spaces				
11.12-	Are forecastle stores free of water, internal spaces and storerooms clean, free from debris and tidy?	No gap		Merger of 12.14 and 12.15
Accommodation Areas				
11.13-	Are accommodation, public spaces, sanitary areas, food store handling spaces, refrigerated spaces, galleys and pantries well illuminated, clean, tidy, in a hygienic condition and obstruction free?	Deep-fat cooking equipment installed onboard ships constructed on or after 01 Jul 2002 in enclosed spaces or on open decks shall be fitted with safety arrangement as per SOLAS II-2 Reg 10 6.4		Merger of 12.16, 12.17 and 12.20
11.14-	Are laundries free of accumulations of clothing that could constitute a fire hazard?	No gap		Previously 12.18

11.15-	If fitted, is the Ship's Hospital clean and tidy and ready for use?	No gap		Previously 12.19
11.16-	Is the condition of electrical equipment in the accommodation satisfactory?	No gap		Previously 12.21
11.17-	Are personnel alarms in refrigerated spaces in good order and operational?	Alarms should be tested on a regular routine.		Previously 12.22

Chapter 12. Ice Operations

No	Question Text	Gap	Crew-Comp	Mapping
Ice Operations				
12.1-	Are procedures available for operations in ice or Polar Waters?	Polar Water Operational Manual (PWOM) approved by Class is required. Procedures for maintaining life support and ship integrity in the event of prolonged entrapment by ice.		Previously 13.1
12.2-	Are means in place to detect ice?	No gap		Previously 13.2
12.3-	Are systems in place for the routine receipt of navigational, meteorological and environmental data including ice data, ice charts and satellite images?	No gap		Previously 13.3
12.4-	Has training specifically addressing navigation in ice or Polar Waters been provided to members of the vessel's complement in accordance with STCW Section A-V/4?	Training include addressing navigation in polar waters in accordance with STCW Regulation V/4	Y	Previously 13.4
12.5-	Are means in place on at least one main engine sea water chest to prevent its freezing or clogging?	No gap		Previously 13.5
12.6-	Are procedures available for operations in sub-zero temperatures?	Means shall be provided to remove or prevent ice and snow accretion around hatches and doors.		Previously 13.6
12.7-	Are means and/or procedures in place to protect personnel from exposure to sub-zero temperatures?	No gap Ref Polar Service Temperature (Polar Ship Certificate 2.3.1 & Polar code part 1A section 1.2.11).		Previously 13.7
12.8-	Are means provided to maintain accommodation spaces at a temperature suitable for habitation?	No gap		Previously 13.8
12.9-	Are means and procedures in place to ensure safe access and movement about the vessel in sub-zero conditions?	No gap		Previously 13.9
12.10-	Are means in place to prevent the icing of wheelhouse windows?	No gap		Previously 13.10

12.11-	Are radars fitted that are of a type classed as being suitable for operation in sub-zero temperatures?	No gap		Previously 13.11
12.12-	Are means and/or procedures in place to ensure that air driven whistles and fog horns are operable at sub-zero temperatures?	No gap		Previously 13.12
12.13-	Are means and/or procedures in place to ensure the operability of critical equipment and systems in sub-zero air temperatures?	Avoiding loss of performance of battery or other stored energy device.		Previously 13.13
12.14-	Are means and/or procedures in place aimed at ensuring the ready availability of life saving appliances?	Ensuring that escape routes shall remain accessible and safe.		Previously 13.14
12.15-	Are means and/or procedures in place aimed at ensuring the operability of fire-fighting systems?	No gap		Previously 13.15
12.16-	Are means and/or procedures in place to ensure the proper functioning of air intakes and fire flaps?	No gap		Previously 13.16
12.17-	Are means and/or procedures in place to protect piping systems on deck from the risk of freezing?	No gap		Previously 13.17
12.18-	Are means and/or procedures in place to ensure the operability of ballast systems and any drenching systems at sea temperatures of -2degC and sub-zero air temperatures?	No gap		Previously 13.18
12.19-	Are means or procedures in place to prevent the icing up of cargo tank primary and secondary venting arrangements?	No gap		Previously 13.19
12.20-	Are means and/or procedures in place to prevent the icing up of air pipes to settling and service tanks required for the operation of the main propulsion plant and essential auxiliaries?	No gap		Previously 13.20
12.21-	Has training specifically addressing operations in sub-zero temperatures and/or Polar Water area and PWOM been provided to the vessel's complement?	Training includes addressing operations in Polar water area and PWOM. Record details of the training in Comments, include compliance with STCW.	Y	Previously 13.21

ISO 9001:2008
Certificate Number: 33714

INTERTANKO London
St Clare House
30-33 Minories
London EC3N 1DD
United Kingdom
Tel: +44 20 7977 7010
Fax:+44 20 7977 7011
london@intertanko.com

INTERTANKO Oslo
Nedre Vollgate 4
5th floor
PO Box 761 Sentrum
N-0106 Oslo
Norway
Tel: +47 22 12 26 40
Fax:+47 22 12 26 41
oslo@intertanko.com

INTERTANKO Asia
9 Temasek Boulevard
#09-01 Suntec City Tower 2
Singapore 038989
Tel: +65 6333 4007
Fax:+65 6333 5004
singapore@intertanko.com

INTERTANKO North America
801 North Quincy Street – Suite 200
Arlington, VA 22203
USA
Tel: +1 703 373 2269
Fax:+1 703 841 0389
washington@intertanko.com

INTERTANKO Athens
Karagiorgi Servias 2
Syntagma
Athens 10 562
Greece
Tel: +30 210 373 1772/1775
Fax: +30 210 876 4877
athens@intertanko.com

INTERTANKO Brussels
Rue du Congrès 37-41
B-1000 Brussels
Belgium
Tel: +32 2 609 54 40
Fax: +32 2 609 54 49
brussels@intertanko.com

INTERTANKO
www.intertanko.com