

Annex 3d: Green Award Requirements (Chemical tanker) Version 2022

Checklists for Office Audits and Ship Surveys

Effective as of 1 May 2022



Annex 3d: Green Award Requirements (Chemical tanker)

Chemical tankers



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Legend for Checklists

0	Indicates which crew/employee may be interviewed/questioned.
	Shows that a certain item is complied.
	Shows that a certain item is not complied.
0	Indicates that an alternative is used, hence the score for that item is a "0".
	The checklist was filled in incorrectly, thus shows "error".
0	Indicates that the whole element did not reach the minimum score, hence a finding is issued. The number shows the scores obtained.
	Shows which elements are minimum = maximum. Hence scores on all items is required to fully comply.
	Indicates that the minimum score for the relevant element is "0", hence a finding will not be issued.

* for detailed interpretations of the colours and the usage of the checklist, please refer to the pdf-file named "Instruction Notes" located on www.greenaward.org under "Certification/Download".

Revision codes

- RN Item/question is renumbered
- RR Rating score of item/question is changed
- N New item or question
- D Item/question is deleted
- M Text of item/question is modified

APPENDIX 1

CHECKLIST - BASIC CRITERIA - OFFICE AUDIT - CHEMICAL TANKER

(CMC-06)

CHECKLIST - BASIC CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022																			
Revision Code	Norm item	 BASIC Office - Chemical	GENERAL MAN. Doc. & Impl.	QUALITY DEPT. Doc. & Impl.	TECHNICAL DEPT. Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT. Doc. & Impl.	OPER./CHART DEPT. Doc. & Impl.	PURCHASING DEPT. Doc. & Impl.	FINANCIAL DEPT. Doc. & Impl.	IT DEPT. Doc. & Impl.	INS- / CLAIM DEPT. Doc. & Impl.	NOT APPLICABLE						
100	MANAGEMENT ELEMENTS																		
101	GENERAL																		
101.1	Are the Management System (MS) Manuals maintained and updated?																		
102	SAFETY AND ENVIRONMENTAL PROTECTION POLICY																		
102.1	Is a company policy concerning safety and the environment and which is signed by the Man. Dir., available?																		
102.2	Are objectives concerning safety and the environment described?																		
102.3	Is this policy maintained and implemented at all shore-based levels as well as all ship-based levels ?																		
103	COMPANY RESPONSIBILITIES AND AUTHORITY																		
103.1	Is the entity who is responsible for the operations of the ship clearly defined ? (Owner or entity)																		
103.2	Are shore-ship communications, defined levels of authority and lines of communication documented and working effectively ?																		
103.3	Are responsibilities and authorities of all office personnel clearly defined ?																		
103.4	Is the designated person provided with shore-based support and adequate resources?																		
104	DESIGNATED PERSONS																		
104.1	Is/are (a) designated person(s) assigned in the office?																		
104.3	Is objective evidence available that the safety and environmental aspects of the operation of each ship is monitored and that the required adequate resources and shore-based support is applied?																		
105	MASTER'S RESPONSIBILITY AND AUTHORITY																		
105.1	Is the responsibility of the master clearly defined and documented?																		
105.6	Does the company have the overriding authority of the master clearly defined? (ISM Code 2002 5.2)																		
105.7	Are master's reviews reported and evaluated?																		

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	100	MANAGEMENT ELEMENTS (continued)																											
	106	RESOURCES AND PERSONNEL AND STCW																											
	106.1	Does the company have a procedure to verify the integrity of the sea staff certification and medical fitness before being assigned to the ship?																											
	106.2	Have the owners/managers established documented policies concerning shore/ship personnel?																											
	106.3	Has the level of competency been defined and documented for office personnel performing functions pertinent to safety and the environment?																											
	106.4	Do arrangements include a provision for masters and officers to receive an adequate introduction and continuous update of the company's safety and environmental system?																											
	106.5	Do arrangements include training and an introduction to the quality system for the executive management ?																											
	106.6	Do office personnel receive training/courses with regard to the ISM Code and are they consistent with the MS manuals?																											
	106.7	Are records of this training/courses available?																											
	106.8	Are internal audits held on board the ships?																											
	106.9	Is standard composition of crew documented in company policy?																											
	106.10	Is personnel promotion policy (ship & office) documented in company procedures?																											
	106.11	Is the working language between the office and the vessels defined?																											
	106.12	Are all senior and deck officers conversant with the English language for maritime communication?																											
	106.13	Are operational instructions on board written in a language understood by officers and shipboard personnel?																											
	106.14	Is the working language monitored and checked by the ship's staff and verified during internal audits?																											
	106.17	Is the Master of a vessel fully conversant with the Company's Management Systems?																											
	107	DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS																											
	107.1	Does the company have procedures for the preparation of plans and instructions for key shipboard operations concerning safety of the ship and prevention of pollution?																											
	107.3	Are tasks, qualifications and responsibilities defined in the manuals and in the job descriptions?																											

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	100	MANAGEMENT ELEMENTS (continued)																					
	108	EMERGENCY PREPAREDNESS	o		o		o		o		o		o		o				o		o		
	108.1	Does the system cover the arrangements needed to ensure that the company, day and night, is prepared to respond effectively to hazards, accidents or emergencies involving their ships?																					
	108.2	Are tasks, qualifications and responsibilities described in the manuals and in the job descriptions?																					
	108.3	Is communication with media included in the emergency procedures?																					
	108.4	Are procedures for an "Emergency room" in the office defined?																					
	109	REPORTS AND ANALYSES OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURENCES			o		o		o		o		o		o						o		
	109.1	Are safety and environmental inspections carried out, documented and reported?																					
	109.2	Does the company have instructions/procedures for the reporting of non-conformities/ near misses?																					
	109.3	Are non-conformities, accidents and hazardous occurrences reported to the office?																					
	109.4	Are corrective and/or preventive actions taken ?																					
	109.5	Does the company have objective evidence to show their support of the shipboard personnel in reporting of non-conformities / near misses?																					
	110	MAINTENANCE OF THE SHIP AND EQUIPMENT			o		o		o														
	110.1	Are ship inspections held at defined intervals? (minimum of twice a year or equivalent)																					
	110.2	Are non-conformities reported including their possible cause?																					
	110.3	Is appropriate corrective action taken?																					
	110.4	Are records of these activities maintained?																					
	110.5	Does the MS require ship-critical equipment and systems to be identified?																					
	110.6	Does the MS provide for specific measures aimed at promoting the reliability of ship-critical equipment and systems?																					
	111	DOCUMENTATION			o																		
	111.1	Does the company have procedures to control documents and data relevant to the Man.System?																					
	111.2	Are valid documents available at all relevant locations?																					
	111.3	Are changes to documents reviewed and approved by authorised personnel?																					
	111.4	Are obsolete documents removed promptly?																					
	112	COMPANY VERIFICATION, REVIEW AND EVALUATION	o		o		o		o		o		o		o		o		o		o		
	112.1	Are internal audits carried out to verify whether safety and pollution-prevention activities, and other procedures, comply with the Management System (MS)?																					
	112.2	Does the company periodically evaluate the efficiency of the MS and review the MS, in accordance with procedures established by the company, when necessary?																					
	112.3	Is a management review done?																					
	112.4	Are the results of audits and reviews brought to the attention of all personnel having responsibility in the area involved?																					
	112.5	Have the management personnel, responsible for the area involved, taken timely corrective actions on deficiencies found?																					

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		IMO ELEMENTS																	
	200	SOLAS 1974																	
	201	SOLAS, General Provisions																	
	201.1	Compliance with General Provisions																	
	201.2	Compliance with the IBC code																	
	212	SOLAS Certificates																	
	212.1	Is an overview of the valid certificates per ship available and is the overview updated?																	
	217	Safety of Navigation / SOLAS chart carriage requirements																	
		ECDIS (Compulsory carriage of ECDIS)																	
	217.1	If carriage of ECDIS is compulsory, is it a company policy for the ECDIS to be type-approved according to Res A 817(19) as amended by MSC 64 (67) and MSC 86 (70) or MSC.232(82)?																	
	217.3	Is it a company policy that an acceptable back-up arrangement is in place? (an independent type-approved ECDIS with an independent position fixing system using official Electronic Navigational Charts (or a combination of official ENC's and Raster Navigational Charts) or a full / reduced folio of up-to-date paper charts, as relevant to the ship's voyage)																	
		Training & Onboard Use of ECDIS (Compulsory carriage of ECDIS)																	
	217.5	Is it a company policy that all officers and masters that use ECDIS for primary navigation are to complete generic training based on IMO model course 1.27?																	
	217.7	Is it a company policy that a risk assessment is carried out for the operation of ECDIS which identifies and controls the hazards when using ENC's and (if used) when ECDIS is in RCDS mode?																	
	217.9	Is the risk assessment and relevant onboard procedures + instructions reviewed on a regular basis (at least once a year or if circumstances require a review) ?																	
	218	Noise Levels On Board Ships																	
		(Only applicable to new ships (ships contracted to build on or after 1st July 2014) of a gross tonnage of 1,600 and above.)																	
	218.1	Is it company policy that the ships are surveyed for the measurement of noise level and the results recorded in the noise survey report in accordance with the Res MSC.337(91)?																	
	218.2	Is it company policy to identify areas of the vessels based on the noise levels and to place relevant visible warning notices at the entrance to these areas? (IMO noise symbols)																	

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	300	MARPOL 73/78											
	301	Provisions concerning Reports on Incidents Involving Harmful Substances (Protocol 1)		o		o		o					
	301.1	Does the company have a procedure in order to report an incident to the nearest coastal state in the event of the ship being abandoned or if a report from the ship is incomplete or unobtainable?											
	310	Prevention of pollution by oil		o		o		o					
	310.1	Does SMPEP include oil pollution emergency procedures?											
	310.3	Is training and testing of the oil pollution emergency procedures done?											
	310.4	Is the plan reviewed for oil pollution emergency procedures? (periodic and event review)											
	310.5	Is an updated list of persons to be contacted available? (coastal States, port contacts, company interest contacts)											
	310.6	Is office personnel familiar with the oil pollution emergency procedures?											
	310.7	Does the company have a policy concerning the retention and disposal of oil residues (sludge)?											
	320	Prevention of pollution by Cargo		o	o	o							
	320.1	Is a shipboard marine pollution emergency plan developed? (SMPEP)											
	320.2	Is training and testing of the pollution emergency plan done?											
	320.3	Is the plan reviewed? (periodic and event review)											
	320.4	Is office personnel familiar with the shipboard marine pollution emergency plan?											
	320.5	Is a Procedures and Arrangements (P&A) manual flag-approved? (per ship)											
	350	Prevention of pollution by garbage		o	o	o							
	350.2	Has the company developed a ship specific garbage management plan detailing the specific ship's equipment, arrangements and procedures for the handling of garbage?											
	350.4	Is it a company policy to designate a person responsible for execution of the garbage management onboard?											

APPENDIX 2

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER

(CMC-07)

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022																											
Revision Code	Norm item		RANKING Office - Chemical		GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS. / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	1000	GENERAL																									
	1200	Enclosed Space Entry & Hot Work																									
	1200.1	Is there an Enclosed Space Entry and Hot Work permit to work system, taking account of IMO and industry guidelines and where relevant local port / terminal requirements?																									
	1200.6	Is company approval of the Hot Work permit required before work can begin?																									
	1200.7	Is an evaluation of the Hot Work permit made (permit shows the appropriate safety precautions relevant to the location of work)?																									
	1200.12	Is the HSQ Manager designated to authorise hot work?																									
	1200.2	Is crew on board provided with suitable personal protective equipment and suitable equipment for testing the atmosphere of an enclosed space? (e.g. breathing apparatus, protective clothing and approved + calibrated atmosphere testing equipment)																									
	1200.14	Are all personnel entering an enclosed space provided with a personal gas detector which can measure oxygen?																									
	1200.15	Is the enclosed space tested for HC and related cargo vapours before entering?																									
	1200.9	Is it company policy that a safety meeting, attended by all personnel involved, is held prior to entering the space or commencement of hot work in order to review procedures and PPE (including those specific for the intended work) ?																									
	1200.10	Does the company require a responsible officer to be designated for all aspects of the operation?																									
	1200.3	Is ship's crew trained and drilled periodically according to enclosed space entry procedures ?																									
	1200.4	Does training also include rescue and first aid?																									
	1200.5	Is there an appropriate procedure in place for entering the pump room ?																									
		Total score																									
		Minimum ranking score required for element 1200 = 120																									
	1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement																									
	1300.1	Is it company policy that the vessels have a compressor for the refilling of air cylinders for breathing apparatus?																									
	1300.2	Alternative for 1300.1: sufficient number of air cylinders for the sole purpose of safety drills.																									
		Total score																									
		Minimum ranking score required for element 1300 = 10																									

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1400	Control of drugs & alcohol onboard										0														
1400.2	Are all seafarers subject to an unannounced alcohol testing on board as initiated by the office? (Approved test equipment to be available on board)																							0	10
1400.1	Are all seafarers subject to shore-based drug and alcohol testing at least once in last 12 months?																							0	15
1400.5	Are all fleet vessels subject to unannounced drug and alcohol testing at least once every year (not exceeding 18 months between two consecutive tests) by an external organisation?																							0	10
1400.6	Alternative to 1400.1 & 1400.5: In case crew members are not subject to shore-based drug and alcohol testing at least once in last 12 months, are all fleet vessels subject to unannounced drug and alcohol testing at least twice in 12 months by an external organisation?																							0	25
1400.7	Does the company contract an external drug and alcohol test organization to monitor fleet vessels for next due vessel tests such that the organization can appropriately decide themselves location and date of attendance?																							0	10
1400.4	Does the company have a procedure that a medical examination for crew members and office personnel regularly visiting ships includes testing on effects from carried cargoes?																							0	10
			Total score																			0	55		
			Minimum ranking score required for element 1400 = 30																						
1500	Emergency Response System										0		0												
1500.4	Are company vessels in receipt of an evaluation report of an annual drill between company, ERS service provider (class) and a company vessel ?																							0	10
1500.5	Is an annual ERT drill performed at the office which includes participation by the ERS service provider (class) and one company vessel ?																							0	15
1500.9	Is an updated list of national & local authorities, as required in the SOPEP & the emergency response plan, available in the office ?																							0	10
1500.10	Do relevant ERT member(s) participate in an ERS training course as provided by the ERS service provider (class) ?																							0	10
			Total score																			0	45		
			Minimum ranking score required for element 1500 = 25																						
1510	Emergency Oil Recovery																								
1510.1	Does the company equip its vessels (GA-certified) with a system providing emergency access to cargo tanks and bunker tanks (for example, from the vessel deck), should the vessel be submerged?																							0	5
1510.2	Does the company ensure that its ships (GA-certified) carry an oil skimmer or a similar device that can be used in an emergency situation of oil spill overboard?																							0	5
			Total score																			0	10		
			Minimum ranking score required for element 1510 = 0																						

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1700	Noise and Vibration Management																								
	Noise/Vibration Monitoring and Measures																								
1700.1	Is it company policy to verify the noise survey report every 5 years?																						0	15	
1700.2	Is it company policy that the crew entering spaces where noise levels exceed 85db(a) should wear hearing protectors which meet the requirements of the HML(High-Medium-Low) method (ISO 4869-2:1994)?																						0	5	
1700.3	Is it company policy to periodically inspect the noise and vibration of all machinery equipment and rectify any abnormalities?																						0	5	
1700.4	Is it company policy to take appropriate measures in order to protect the crew from cargo handling equipment noise if it exceeds 85db(a) (by taking into account technical solutions and/or exposure limits)?																						0	10	
	Noise Mitigation and Health Hazards																								
1700.5	Does the SMS include the following? 1.Hearing protection; 2.Exposure limits; 3.Training regarding noise and health hazards.																						0	5	
1700.6	Does the company provide the crew with a hearing conservation programme which includes the following: 1.Hazards of high and long duration of noise exposure; 2.Maintenance of audiometric test records; 3.Periodic analysis of records and hearing acuity of individuals with high hearing loss.																						0	5	
1700.7	Does the company assess the risks associated with distractions to onboard operations, communication and rest hours caused by exposure to high levels of noise?																						0	10	
1700.8	Is it company policy to determine the noise exposure level of each rating/officer by taking into account the job profile, time spent by each crew member in different work spaces? (ISO 9612:2009 procedure)																						0	10	
			Total score																			0	65		
			Minimum ranking score required for element 1700 = 25																						
1710	Underwater Noise and Vibration Management																								
1710.1	Is it company practice to design a newbuild ship in such a manner to attenuate/reduce underwater noise?																						0	10	
1710.2	Does the company take any of the following measures to reduce underwater noise and vibration: 1.Installation of state of art propellers (With reduced cavitation); 2.Wake conditioning devices; 3.Installation of air injection propeller; 4.Vibration isolators mounted on the diesel generators; 5. Installation of propeller boss cap with fins; 6. Others = *fill during audit*?																						0	10	
	If others =		*fill during audit*																						
1710.3	Does the company take any additional maintenance routines (e.g. polishing/coating) to reduce cavitation from the propeller?																						0	5	
1710.4	Does the company opt for re-routing or slow steaming where possible and practicable to protect whale sensitive areas?																						0	5	
			Total score																			0	30		
			Minimum ranking score required for element 1710 = 0																						

[illegible]

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	2000	NAVIGATION / BRIDGE OPERATIONS																								
	2100	Navigation																								
	2100.6	Does the company have a contract for automatic supply of new hydrographic publications?																								
	2100.7	Does the company have a contract for electronic update of hydrographic publications? (eg. Temporary and Preliminary NtM)																								
	2100.8	Is it a company policy to include navigational equipment in electronic Planned Maintenance System?																								
	2100.9	Are masters entitled to use non-compulsory pilot services? (must be stated in a company procedure)																								
	2100.12	Is the company aware of the vessel's critical areas transiting?																								
	2100.13	Does the company use weather routing services for ships on long haul voyages?																								
	2100.18	Is it a company policy to enrol the vessels in a meteorological & oceanographic service in a form of a software application?																								
	2100.19	Alternative to 2100.18: Do the vessels have a capability to receive comprehensive weather information from the office or from coastal stations / platforms?																								
	2100.14	Does the company have instructions for navigating in sensitive areas? (IMO SN/Circulars)																								
	2100.15	Is it a company policy to equip vessels with the multi constellation GNSS receivers?																								
	2100.16	Is it a company policy to equip vessels with the eLoran receivers?																								
	2100.17	Is it a company policy that the position for all stages of voyage is compared with a different method of positioning than GPS?																								
		Total score																								
		Minimum ranking score required for element 2100 = 50																								

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	2111	Electronic chart display & information systems / ECDIS																									
		Applicable to the companies with ships for which carriage of ECDIS is compulsory																									
	2111.3	Does the company provide navigational procedures concerning the use of ECDIS?																							0	10	
	2111.4	Is it a company policy to list ECDIS as critical equipment and integrate into PMS? (hardware and software)																							0	5	
	2111.5	Is it a company policy that ECDIS is tested according to IHO ECDIS data presentation and performance check with a use of test data set after every update of the software (including back up)?																							0	5	
	2111.6	Is it a company policy that regardless of the generic training the crew is familiarised with the ECDIS unit(s) installed onboard according to the Industry Recommendations for ECDIS Familiarisation?																							0	15	
	2111.7	Is it a company policy to provide structured ECDIS training(s) for all officers on top of the generic training (besides the familiarization onboard in R2111.6)?																							0	5	
	2111.8	Does the company have a contract / agreement with ECDIS manufacturer in relation to the maintenance of the software?																							0	5	
	2111.11	Does the company have a standard for display settings (layers) of ECDIS for various navigation conditions (arrival / departure - coastal - deep sea)?																							0	5	
	2111.12	Is it a company policy that the vessels have a basic folio of paper charts (in case second ECDIS is a back up system)?																							0	10	
				Total score																				0	60		
				Minimum ranking score required for element 2111 = 35																							
	2120	Fuel Change Over / Ballast Water Exchange													0												
	2120.1	Is it company policy that the voyage plan (checklist) include when fuel change over <u>should</u> be carried out?																							0	10	
	2120.2	Is it company policy that the voyage plan (checklist) include when ballast water exchange <u>can</u> be carried out?																							0	10	
	2120.3	Is it company policy that the voyage plan (checklist) include when tank wash procedures <u>cannot</u> be carried out?																							0	10	
				Total score																				0	30		
				Minimum ranking score required for element 2120 = 30																							
	2300	Mooring Operations									0																
	2300.1	Does the company have procedures/instructions for mooring/unmooring operations?																							0	10	
				Total score																				0	10		
				Minimum ranking score required for element 2300 = 10																							

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	3000	MACHINERY / ENGINE OPERATIONS																									
	3100	Bunker Operations																									
	3100.1	Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%)																								0	10
	3100.2	Is a checklist used for bunker operations (company format) ?																								0	10
	3100.3	Does the bunker procedure include a bunker plan (company format) ?																								0	10
	3100.4	Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks?																								0	10
	3100.5	Is there an instruction that all persons involved are to be familiar with the intended bunker operation and/or internal transfer operation and their duties?																								0	10
				Total score																				0	50		
				Minimum ranking score required for element 3100 = 50																							
	3101	Bunker Operations - LNG																									
	3101.1	Does the company SMS specify that only a relevant IAPH LNG bunkering checklist must be used?																								0	10
	3101.2	Is it company policy to ensure that LNG-fuelled ships are equipped with LNG specific PPEs such as protective cryogenic gloves and safety goggles with side protection?																								0	10
	3101.3	Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room?																								0	10
	3101.4	Is it company policy that ships are mandated to provide a dedicated watch (from a safe location) on bunker station during the entire duration of the LNG bunkering?																								0	5
	3101.5	Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?																								0	5
	3101.6	Does the company provide its shipboard personnel a shore-based training on LNG bunkering?																								0	10
				Total score																				0	50		
				Minimum ranking score required for element 3101 = 25																							

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	3200	Fuel oil management																							
		A. Contracting / Procurement																							
	3200.14	<u>N/A in case charterer is responsible for supplying bunkers (for all GA ships)</u> Is it company procedure that bunker purchasing contracts state that the fuel oil be supplied with reference to ISO 8217 specifications (latest edition is recommended)?																					0	10	
	3200.15	<u>N/A in case owner / manager or third party ship manager is responsible for purchasing bunkers (for all GA ships)</u> Is it company procedure that the technical requirements of the ship and optimal fuel oil specifications are communicated to the charterer for their consideration?																					0	10	
	3200.13	Is an evaluation of all fuel oil suppliers carried out to identify "quality-oriented fuel oil suppliers" before signing the bunker purchasing contract with a chosen supplier and are the negative results brought to the attention of the charterer (where applicable)?																					0	10	
		B. Sampling & Testing																							
		B.1 MARPOL delivered fuel oil sampling																							
	3200.11	Is it company policy that fuel oil sampling (during bunkering) is carried out using an automatic sampler (time or flow proportional) in accordance with Marpol Annex VI?																					0	10	
		B.2 In-use fuel oil sampling																							
	3200.16	Is it company policy that fuel oil samples are drawn from the following designated sampling points at least once every four months for testing of catalytic fines & separator efficiency at a recognized fuel analysis organization ashore? 1. at engine inlet 2. before separator 3. after separator																					0	10	
		B.3 Testing																							
	3200.1	Is it company procedure that bunkered fuel oil is always tested (before use onboard) by a recognized fuel analysis organization ashore in accordance with the requirements of ISO 8217 standard (same edition for which the fuel was ordered)?																					0	40	
		C. Operational procedures																							
	3200.17	Does the company prohibits its ships to commingle two different bunkers (even of the same grade of fuel)?																					0	10	
	3200.18	For the situations where commingling of two different fuels is unavoidable, does the company have commingling procedure explaining the steps to be followed to determine the compatibility of two bunkers (including the reference test methods)?																					0	5	
		D. Additional questions																							
	3200.5	Are global bunker quality alerts received from company fleet experience and fuel analysis organisation shared with relevant ships by issuing technical bulletins or circulars?																					0	10	
	3200.19	Is it company procedure that bunker suppliers are asked to provide the copies of the product's valid certificate of quality (COQ) and associated laboratory analysis reports verifying the details on the COQ?																					0	5	
																							0	120	
			Total score																			0	120		
			Minimum ranking score required for element 3200 = 60																						

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4000	CARGOES / CARGO OPERATIONS																											
4100	Chemical Tanker Cargo Operations & Additional Green Award requirements																											
4100.1	Is it company procedure that the ship shore safety checklist has to be used before loading/unloading operations?																										0	10
4100.2	Does the company have instructions/procedures to control the access of unauthorized persons on board?																										0	10
4100.18	Does the company have cargo related safety instructions for visitors? (access on board, PPE, access on deck; all in relation to nature of cargo)																										0	10
4100.3	Does the company have instructions for smoking areas on board?																										0	10
4100.4	Does the company have procedures/instructions in relation to the entire cargo tank operations?																										0	10
4100.5	Is company aware of cargo specifications which are required by the charterer of the ship?																										0	10
4100.19	Does the company require a Shipping Document (SD) from charterer/shipper?																										0	5
4100.20	Does the Shipping Document contain cargo specifications as required by the IBC code?																										0	5
4100.21	Are relevant Shipping Documents distributed to the respective vessels prior cargo loading operations?																										0	5
4100.22	Is the annual MEPC circular on new substances sent to the vessels?																										0	5
4100.23	In case of new products, are relevant "tripartite addendums" sent to the relevant vessels?																										0	5
4100.24	Does the company maintain a cargo product list (database/system) which encompasses IBC Ch 17/18/19, MEPC.2 circulars and products/mixtures assessed under the Tripartite Agreement?																										0	5
4100.25	Is the cargo product database made available and updated for the company vessels?																										0	10
4100.26	Are document control procedures applicable to the cargo product database?																										0	10
4100.6	Does the company distribute relevant cargo instructions to the vessel? (e.g. is ship compatible for intended cargo)																										0	20
4100.7	Are there procedures to ensure that a sufficient number of personnel is available in case of emergency during port stay?																										0	10
		Total score																							0	140		
		Minimum ranking score required for element 4100 = 140																										

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	5000	PREVENTION OF POLLUTION																									
	5100	Biofouling Management																									
N	5100.5	Does the company have ship-specific procedures/instructions (according to IMO guidelines) for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species?																							0	10	
N	5100.6	Does the company define frequency and timing of in-water inspection and proactive hull cleaning in consultation with coatings manufacturer and/or coatings consultant for each ship under its management?																							0	5	
N	5100.7	Is it a company policy to define potential trigger points for reactive hull cleaning – based on performance monitoring or other relevant datasets (such as increased drag or increased friction)?																							0	5	
N	5100.8	Is it a company policy to use in-water cleaning only in combination with capture and filtration of the cleaned material and subsequent waste treatment and disposal, when made available in ports?																							0	10	
				Total score																				0	30		
				Minimum ranking score required for element 5100 = 5																							

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	5200	Waste Management / Garbage Handling Onboard																							
		A. General procedures																							
	5200.17	Does the company have a policy to reduce garbage at source? For example, bulk packaging of consumable items.																						0	5
	5200.22	Is it a company policy that recyclable material such as paper, plastic, metal (for example, tin cans) and dunnage are always delivered to the port reception facilities?																						0	5
		B. Garbage types																							
		B.3 Ashes and clinkers																							
	5200.25	Is it a company policy that all incinerated ashes and clinkers are always delivered to the port reception facilities?																						0	10
		B.4 Cleaning agents & additives																							
	5200.28	Is it a company policy to use <u>non harmful</u> (MARPOL Annex V compliant) cleaning agents and additives for cleaning the deck / external surfaces?																						0	10
		B.5 Plastics																							
	5200.20	Is it a company policy that plastic is never incinerated?																						0	10
	5200.38	Does the company have a policy to reduce the use of disposable and single-use plastics on board (at least focusing on plastic cutlery, dishes & straws and beverages & mineral water bottles in bonded stores)?																						0	10
	5200.41	Does the company have a policy to avoid procuring food items in single servings of plastics pots (for example, replacing small yoghurt pots with decanted supplies in large containers)?																						0	5
	5200.42	Does the company combat micro-plastics in the laundry system by adding a fine filtering mesh to ship's washing machine's outlets to prevent fibres reaching the ocean?																						0	5
	5200.43	Does the company forbid its ships to dump old plastic ropes and mooring lines at sea and encourage to retain them on board until landed ashore for correct disposal?																						0	5
		C. Additional questions																							
	5200.16	Does the company provide training / education programme for the crew in order to create awareness in relation to garbage management?																						0	5
	5200.18	Does the company participate in national / international Marine Litter Monitoring Programs?																						0	5
	5200.19	Does the company have a reporting system on lack of availability of reception facilities for certain types of garbage? (such as GISIS by IMO or equivalent)																						0	5
																								0	80
			Total score																			0	80		
			Minimum ranking score required for element 5200 = 30																						

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	5410	NOx Emissions																							
		A. Emission Monitoring																							
	5410.10	Does the company use a continuous emission monitoring system (in-situ or extractive) for monitoring and recording NOx emissions?																						0	10
		B. Emission Reduction																							
	5410.20	Does the company use any one of the following measures on board one or more of its vessels to reduce NOx emissions from main and/or auxiliary engines?																						0	30
		Measures taken to reduce NOx emissions	If YES, choose from below options																						
		Direct Water Injection																							
		Fuel Water Emulsification																							
		Intake Air Humidification																							
		Slow Steaming																							
	5410.21	Is it company policy to implement regulated slow steaming on some or all of the vessels within their fleet in an effort to reduce NOx emissions?																						0	10
		C. Additional Questions																							
		Exhaust Gas Recirculation (EGR)																							
	5410.22	Are negative results from the continuous monitoring of exhaust gas recirculation bleed-off discharge water collected from the ship and addressed by the company? <i>*The guidelines set out in MEPC.259 (68) are applicable to EGR bleed-off discharge water as well.</i>																						0	10
	5410.24	Does the company's PPE matrix include handling of caustic soda for exhaust gas recirculation?																						0	5
	5410.25	Does the company provide the relevant crew with manufacturer training for the EGR unit? <i>*The manufacturer training should cover the normal operation of the EGR system including bunkering of any chemicals (consumables), calibration of sensors, routine maintenance as well as the procedures to be followed in case of system failure and deviation from normal operation.</i>																						0	5
		Selective Catalytic Reduction (SCR)																							
	5410.26	Does the company install a monitoring unit which monitors and measures any formation of ammonia slip? <i>*The monitoring unit should be capable of issuing a warning in the event of ammonia formation.</i>																						0	10
	5410.27	Does the company take adequate measures to avoid the breakdown of the SCR unit? Measures should include (all of) the following: 1. Requisition's of materials 2. Redundancy 3. Effects of back pressure 4. Maintenance regimes of the SCR 5. Monitoring the condition of the catalyst.																						0	10
	5410.28	Does the company provide the relevant crew with manufacturer training for the SCR unit? <i>*The manufacturer training should cover the normal operation of the SCR unit including bunkering of any chemicals (consumables), calibration of sensors, routine maintenance as well as the procedures to be followed in case of system failure and deviation from normal operation.</i>																						0	5
			Total score																					0	95
			Minimum ranking score required for element 5410 = 35																						

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5430	Particulate Matter (PM) Emissions																								
5430.10	Does the company use any one of the following measures on board one or more of its vessels to reduce PM emissions from main and/or auxiliary engines?																						0	30	
	Measures taken to reduce PM emissions	If YES, choose from below options																							
	Diesel Particulate Filter																								
	Diesel Oxidation Catalyst																								
	Electrostatic Precipitator																								
		Total score																							
		Minimum ranking score required for element 5430 = 0																							
5440	Greenhouse Gas (GHG) Emissions - CO₂ Emissions																								
	A. Emission Monitoring																								
5440.10	Does the company use flow meters for monitoring and recording of fuel consumption? (Flow meter is to be calibrated and certified by for example a classification society)																						0	10	
5440.6	Is an energy efficiency baseline measured for each ship? *Using a calculation of fuel consumption (Unit = Fuel consumption per transport work expressed in grams per tonne-nautical mile or other relevant unit as applicable to relevant ship category) (or) *Using measurement of CO ₂ emissions from emission monitoring equipment (grams CO ₂ per tonne nautical mile or other relevant units as applicable to relevant ship category) (Baseline is a measurement of the ships average (operational) energy efficiency under normal operating conditions before energy efficient measures or policies are implemented).																						0	5	
5440.14	Does the company use a ship performance monitoring software to monitor and reduce energy consumption by operational measures for their entire fleet?																						0	20	
	B. Emission Reduction																								
	Short term goals (CO₂ reduction through energy efficiency measures)																								
5440.15	(Design and operational based measures) Energy efficiency measures implemented on-board company vessels?																						0	20	
	For ease of use, measures are grouped according to the GLOMEEP Energy efficiency technologies information portal.	If YES, choose from below options and fill-in supplement CO ₂ - GloMEEP tab																							
	Measures related to Machinery																								
	Measures related to Propulsion and Hull Improvements																								
	Measures related to Energy Consumers																								
	Measures related to Energy Recovery																								
	Measures related to Technical Solutions for optimizing the operations																								
5440.16	Has the company achieved an annual average reduction of at least 2.0% in CO ₂ emissions per transport work (gCO ₂ /tnm) since 1st Jan 2013?																						0	30	
5440.17	Alternative to 5440.16: Has the company achieved an annual average reduction of at least 1.0% in CO ₂ emissions per transport work (gCO ₂ /tnm) since 1st Jan 2013?																						0	15	

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		Mid term goals (CO ₂ reduction through the use of low carbon fuels)																							
	5440.18	Main engines: Does the company have any vessels within their fleet which use low carbon fuels such as:																					0	15	
		Low carbon fuels	If YES, choose from below options																						
		LNG (Liquefied Natural Gas)																							
		LPG (Liquefied Petroleum Gas)																							
		GTL (Gas to liquid) fuel																							
		Bio-diesel																							
		Bio-LNG (Bio-methane)																							
		Methanol																							
		Ethanol																							
		Dimethyl Ether																							
		Other: *fill during audit*																							
		If others =																							
	5440.19	Auxiliary engines: Does the company have any vessels within their fleet which use low carbon fuels such as:																					0	15	
		Low carbon fuels	If YES, choose from below options																						
		LNG (Liquefied Natural Gas)																							
		LPG (Liquefied Petroleum Gas)																							
		GTL (Gas to liquid) fuel																							
		Bio-diesel																							
		Bio-LNG (Bio-methane)																							
		Methanol																							
		Ethanol																							
		Dimethyl Ether																							
		Other: *fill during audit*																							
		If others =																							

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	5441	Greenhouse Gas (GHG) Emissions - Methane (CH₄) Emissions - Main Propulsion																							
		B. Emission Reduction																							
		Gas Turbine or High Pressure Dual Fuel engine																							
	5441.2	Does the company ensure that at least one of its LNG-powered ships operate on low (or no) Methane Slip technology, for example, Gas Turbine or High Pressure Dual Fuel (HPDF) Engine?																					0	20	
		Other Engine Types																							
	5441.3	Does the company take measures and is able to achieve annual reduction in Methane Slip from LNG-fuelled engines fitted on board its fleet of ships?																					0	10	
		A. Emission Monitoring																							
	5441.1	Does the company use a continuous emission monitoring system (in-situ or extractive) for monitoring and recording Methane Slip?																					0	10	
		C. Additional questions																							
	5441.4	Does the company provide awareness training to shipboard personnel on methane emissions from LNG-fuelled engines?																					0	5	
	5441.5	Does the company collaborate with engine manufacturers on research & development projects aiming to improve methane emissions from LNG-fuelled engines?																					0	10	
		Total score																							
		Minimum ranking score required for element 5441 = 0																							
	5450	Newbuild policy			0		0																		
	5450.1	Does the company policy for newbuilds implement additional measures to reduce harmful air emissions (NOx, SOx and PM) and improve energy efficiency (reduce CO ₂ or fuel consumption)?																					0	40	
		Total score																							
		Minimum ranking score required for element 5450 = 0																							
	5460	Environmental Ship Index (ESI)			0		0																		
	5460.1	Is it company policy for ships to participate in the Environmental Ship Index, where applicable? (The ESI is a project from the World Port Climate Initiative; its aim is to recognise ships whose air emissions are below regulatory limits and in doing so contribute to improvements in air quality and reduction of greenhouse gas emissions in the shipping sector).																					0	50	
		Total score																							
		Minimum ranking score required for element 5460 = 0																							

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5500	Sewage Management																								
	Sewage Treatment Plant																								
5500.1	Is it company policy to treat the sewage with a sewage treatment plant which uses minimal or no harmful chemicals?																						0	10	
5500.2	Is it company policy to sample and monitor the discharged effluent periodically (at least annually) for lab testing ashore to check the compliance with: 1. MEPC 159(55) for plants installed after 1st Jan 2010; 2. MEPC 227(64) for plants installed after 1st Jan 2016.																						0	10	
5500.4	Does the company have a procedure to monitor and address any non-compliance in the effluent standards?																						0	10	
	For all ships: Sewage Holding Tank																								
5500.6	Did the company perform a risk assessment to calculate the capacity of the holding tank?																						0	20	
			Total score																			0	50		
			Minimum ranking score required for element 5500 = 20																						
5510	Grey Water Management																								
5510.1	Is it company policy to install a sewage treatment plant capable of treating grey water?																						0	15	
5510.2	Is it company policy to not discharge grey water within coastal and port areas?																						0	10	
			Total score																			0	25		
			Minimum ranking score required for element 5510 = 0																						
5700	Ballast Water Management																								
	For ships required to follow D-1 standard (as per International Ballast Water Management Certificate (IBWMC))																								
RR	5700.5	Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled ?																					0	5	
RR	5700.6	Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange?																					0	5	
N	5700.10	Does the company ensure that relevant ships voluntarily comply with D-2 ballast water management standard using a type-approved ballast water treatment system (BWTS)?																					0	10	
	For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC))																								
N	5700.11	Does the company develop ship-specific contingency plans taking into account system design limitations, for example, - the UV-based BWTS cannot operate correctly in ports where the water is very muddy, - when operating in low salinity ports, the crew should plan to carry enough salt water or brine in order for the electrochlorination BWTS to function effectively.																					0	10	
N	5700.12	Does the company ensure the following in order to keep the BWT systems on board in operable condition: - maintain full inventory of manufacturer recommended spare parts list on board - define & maintain safe-margin stock of consumables on board (such as chemicals with short shelf-life, UV lamps, etc. as required by the installed system)																					0	5	
N	5700.14	Does the company train relevant crew to operate ship-specific BWT systems, for example, by means of computer-based training, training at the makers facilities or on a simulation BWMS that mimics real BWTS operations?																					0	10	
N	5700.15	Does the company conduct on-board familiarization of relevant crew for the operation of the BWTS installed on board?																					0	10	
N	5700.16	In addition to the relevant crew, does the company include shore-based management (ship managers/superintendents/port engineers) in the BWMS training programs?																					0	5	
			Total score																			0	60		
			Minimum ranking score required for element 5700 = 20																						

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5801	Protection of fuel oil tanks, lube oil tanks and hull																								
	For Owner / Managers only (Not applicable to 3rd-party ship managers)																								
5801.4	Does the company require ship building yards to use advanced shipbuilding plates (highly ductile steel) or structural features to build (a part of) hull structure and/or fuel tanks of new ships (for example, sandwich plate structure)?																						0	30	
			Total score																			0	30		
			Minimum ranking score required for element 5801 = 0																						
	Lubrication and Use of Oils (Element nr.: 5810, 5811 & 5812)																								
5810	Stern tube lubrication																								
5810.1	Does the company install a class approved stern tube <u>water</u> lubricated system which uses <u>sea water</u> as a lubricant? (system includes water conditioning and monitoring equipment)																						0	60	
5810.6	Alternative for 5810.1 & 5810.3: Does the company install a class approved stern tube <u>water</u> lubricated system which uses <u>fresh water</u> as a lubricant? (system includes water and conditioning and monitoring equipment) *Additives used to maintain the condition of the water should be environmentally friendly.																						0	50	
5810.3	Alternative for 5810.1 & 5810.6: Is there a company policy to fit vessels with a class approved stern tube lubrication system with an <u>air type</u> or <u>void space seal</u> ?																						0	25	
			Total score																			0	60		
			Minimum ranking score required for element 5810 = 0																						
5811	Mooring wire lubrication																								
5811.1	Is it company policy to use a mooring wire lubricant / grease that is certified according to the EEL?																						0	20	
			Total score																			0	20		
			Minimum ranking score required for element 5811 = 0																						
5812	Deck equipment lubrication (use of oils)																								
5812.1	Is it company policy to use grease that is certified according to the EEL (all deck equipment)?																						0	15	
5812.2	Is it company policy to use gear oil that is certified according to the EEL (all deck equipment)?																						0	10	
5812.3	Is it company policy to use hydraulic oil that is certified according to the EEL in mooring and anchor appliances?																						0	10	
5812.4	Is it company policy to use hydraulic oil that is certified according to the EEL in crane appliances?																						0	10	
5812.6	Due to characteristics of environmentally friendly lubricants (EEL certified) are extra measures taken into account for the applicable system if needed? (e.g. condition of seals & filters, temperature & condition of oil, prevention of humidity ingress etc.)																						0	10	
			Total score																			0	55		
			Minimum ranking score required for element 5812 = 0																						

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5820	Management of bilge water and sludge handling onboard																										
5820.3	Is it company policy to familiarize engine room personnel with on board sludge and bilge water management procedures?																									0	10
5820.4	Is it company policy to ensure that all engine room personnel are familiar with the system layout, drawings and manuals?																									0	5
5820.5	Is it company policy to include Sludge/Bilge and Soot collection tanks in the PMS for regular cleaning / inspection?																									0	5
5820.6	Is it company policy to build vessels with bilge and sludge handling system in accordance with the MEPC.1/Circ. 642 guidelines?																									0	5
																										0	25
																										0	25
5821	Outfitting of bilge water system																										
	A. Clean Drains (Drains that are <u>normally not</u> contaminated by oil)																										
5821.1	Does the company have a policy that bilge water from the Clean drain tank (for the collection of "clean drains", as per MEPC.1/Circ.642) passes through 15 ppm oil content meter and alarm?																									0	5
5821.17	Does the company have a policy of logging discharges from the Clean drain tank (tank used for the collection of "clean drains", as per MEPC.1/Circ.642) in the engine room logbook?																									0	5
	B. Soot Collection Tank arrangement																										
5821.2	Are management instructions regarding disposal of soot and soot-water mixtures available onboard for ships equipped with Soot separation / collection tank?																									0	5
	C. Oily bilge water tank arrangement																										
5821.4	Is it company policy to install Clean Water Tank (to enable Oily Bilge Water to be processed while in port and special areas)?																									0	10
5821.5	Is it company policy to pump Oily bilge water from the Oily bilge water holding tank through the Oily Water Separator to the Clean water tank (rather than overboard discharge)?																									0	5
	D. Oily water separator / Oil content meter																										
5821.6	N/A for vessels keel laid after 2005 Is it company policy to install an oil content meter with an automatic stopping device capable of measuring the difference in emulsifying particles and oil, as per IMO resolution MEPC.107(49)?																									0	5
5821.7	Are instructions available in the management system to avoid that the Oil Content Meter is flushed/diluted with clean water during Oily Water Separator operation or is an equipment or a protection system installed (e.g. White Box) to prevent illegal discharges of bilge water from machinery spaces?																									0	10
5821.8	N/A for vessels keel laid after 2005 Is it company policy to equip the Oily Water Separator with a re-circulating facility for testing purposes as per IMO resolution MEPC.107(49) 6.1.1. ?																									0	5
	5821.9 is an alternative to 5821.1 - 5821.8 & 5821.17 (all the above)																										
5821.9	Is it a company policy to always deliver all bilge water to reception facilities?																									0	50
																										0	50
																										0	50

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5822	Outfitting of sludge handling system																								
5822.1	Is it company policy to install a sludge collecting pump as per MEPC.1/Circ.642? (with the sole purpose of collecting the sludge from different ER tanks to the Oil Residue (Sludge) Tank)?																							0	5
5822.2	Is it company policy to install a separate sludge discharge pump with the purpose of discharging the sludge to reception facility?																							0	5
5822.3	Is it company policy to improve the efficiency and capacity of the sludge handling system by installing: - a tank or system with the sole purpose of removing large quantities of water from the sludge? - a separate tank or system with the sole purpose of evaporating water from the sludge? - a separate tank or system with the purpose of mixing the sludge while incinerated (in incinerator or boiler)																							0	5
5822.6	Is it a company selection process to assign ships that always deliver all sludge to reception facilities?																							0	5
			Total score																			0	20		
			Minimum ranking score required for element 5822 = 10																						
5900	Ship Recycling - Inventory of Hazardous Materials																								
	New buildings - For Owner / Managers and 3rd-party Ship Managers For 5900.1, 5900.12 and 5900.2																								
5900.1	Does the company require the shipyard to develop an "Inventory of Hazardous Materials" (Part I) at the stage of design and/or construction? (requirement to be part of the building contract)																							0	40
5900.12	Does the company require the shipyard to have procedures to require equipment-/machinery-suppliers to provide a "Material Declaration"? (used by the yard to develop the Inventory Part I) (requirement to be part of the building contract)																							0	10
5900.2	Does the company require the shipyard to include in these procedures that the "Material Declaration" contains information on the safe removal of hazardous materials? (requirement to be part of the building contract)																							0	10
	Existing ships - For Owner / Managers and 3rd-party Ship Managers For 5900.10 and 5900.13																								
5900.10	Is each Green Award-certified company vessel in the possession of an "Inventory of Hazardous Materials" (Part I completed)?																							0	40
5900.13	Alternative to 5900.10: Has the company started the process to prepare Part I of the "Inventory of Hazardous Materials" with a target completion date for each Green Award certified vessel in the fleet?																							0	20
			Total score																			0	100		
			Minimum ranking score required for element 5900 = 40																						

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5910	Ship Recycling - Policy for ships due to be recycled		0		0		0																		
	For Owner / Managers only (Not applicable to 3rd-party ship managers)																								
5910.8	Has a company policy been implemented within the Management System that end-of-life vessels will only be recycled at a recycling facility either compliant with the requirements of the Hong Kong Convention or on the EU-list? (regardless of being sold directly to a recycling facility or to a cash buyer)?																						0	20	
5910.2	Has a company procedure been implemented within the Management System to audit a recycling facility before concluding a "contract of sale"?																						0	10	
5910.4	Has a company policy been implemented that the "contract of sale" will include the requirement to develop a "Ship Recycling Plan" by the recycling facility (in consultation with the owner) or does the "contract of sale" with the cash buyer include the obligation to request such a plan upon sale to the recycling facility?																						0	20	
5910.5	Has a company procedure been implemented within the Management System that a Final Survey, by an independent organization, will be carried out on the "Inventory of Hazardous Materials" (Part I, Part II and Part III) before delivery to either the recycling facility or cash buyer?																						0	20	
5910.6	(Preparation of vessel before delivery) Has a company procedure been implemented to ensure that the vessel's cargo spaces & other compartments where possible, will be delivered to either the recycling facility or cash-buyer in a "gas-free & safe for entry and hot work" condition?																						0	20	
5910.7	(Preparation of vessel before delivery) Has a company procedure been implemented to clearly mark all compartments which could have an oxygen deficient or dangerous atmosphere? (e.g. cofferdams, fuel oil tanks, waste oil tanks, black/grey water tanks, etc.)																						0	20	
5910.9	Does the company disclose it's ship recycling policy in a public domain (such as company website) or via an environmental initiative such as SRTI (Ship Recycling Transparency Initiative)?																						0	10	
	Policy regarding monitoring the recycling of company vessels																								
5910.10	Has a company procedure been implemented within the Management System to deploy a full-time personnel at the recycling facility for the entire duration of recycling of the company vessels (to monitor and report the recycling process)?																						0	20	
5910.11	<u>Alternative to 5910.10 & 5910.12</u> Has a company procedure been implemented within the Management System to hire third-parties (consultants or cash buyers) for continuous monitoring and reporting of the recycling process employed by the recycling facility to dismantle the company vessels?																						0	10	
5910.12	<u>Alternative to 5910.10 & 5910.11</u> Has a company procedure been implemented within the Management System to audit the recycling facility during the recycling of the company vessels?																						0	5	
			Total score																			0	140		
			Minimum ranking score required for element 5910 = 60																						

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	6000	MAINTENANCE / SURVEYS																									
	6100	Programme of Inspections																									
	6100.1	Has the company developed an internal technical inspection program?																								0	10
	6100.2	Does the company have relevant previous survey and internal technical inspection reports?																								0	10
	6100.3	Does the company have records of past ship repairs for each of their ships?																								0	10
	6100.4	Does the company have procedures/instructions for hull / ship's construction condition-inspections to be carried out by ship's personnel?																								0	20
	6100.6	Does the company have information regarding the relevant maintenance level of the vessel?																								0	10
	6100.7	Is an owner's inspection report available?																								0	10
																										0	70
																										0	70
	6110	Critical and Stand-by Equipment																									
	6110.1	Is the risk assessment carried out in order to create a list of critical equipment for every ship after intermediate survey (at least every 2.5 years)?																								0	10
	6110.2	Does the list of critical equipment include and specify stand-by equipment for every ship?																								0	10
	6110.3	Is the feedback from the ship considered in the process of creating a list of critical equipment? (eg. PMS reports)																								0	10
	6110.4	Is it company policy to categorize the ship into departments as per TMSA (OCIMF) in the process of creating a list of critical equipment?																								0	5
	6110.5	Is it company policy to install a Computer Based Program to register failures, break downs and near misses in order to have a constant event report on the systems?																								0	10
	6110.6	Are those event reports considered in creating a list of critical equipment?																								0	10
	6110.7	Is it company policy to install a Computer Based Program for spare parts management of critical equipment and stand-by equipment?																								0	10
	6110.8	Is it company policy to have safety stock inventory reports for critical equipment and stand-by equipment?																								0	10
																										0	75
																										0	75

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	6200	Mooring Equipment							●								●										
	6200.1	Does the company have instructions for carrying out winch brake tests (to be carried out at least once a year or after an excessive load)?																								0	10
	6200.2	Does the company provide the ship with a winch brake test kit?																								0	5
	6200.5	Are inspection, maintenance and discard criteria for mooring wires and tails / fibre ropes established and carried out by a competent person? (time interval for inspection should be in the PMS)																								0	10
	6200.8	Do these criteria take manufacturer's recommendations into account ?																								0	10
	6200.9	Does the company give guidance for an additional examination after unusual events such as long periods of inactivity, excessive loads, heat exposure, loading/discharge at swell ports, etc?																								0	5
	6200.10	Does the company give instructions for internal inspections and do these inspections take manufacturer's recommendations into account?																								0	10
	6200.11	Are the lubricants & cleaning products compatible with the wire and approved by the wire manufacturer?																								0	5
	6200.6	Is a log for "workingdays" of mooring wires and tails / fibre ropes maintained? (to predict the point of discard & for evaluation of wire/rope performance)																								0	10
	6200.7	Does the company provide the ship(s) with an automatic wire rope lubricator?																								0	10
	6200.12	Alternative for 6200.7: (for fibre ropes) Are there procedures for care of fibre ropes?																								0	10
			Total score																						0	75	
			Minimum ranking score required for element 6200 = 45																								
	6300	Corrosion Prevention of Seawater Ballast Tanks							●																		
	6300.8	Is it company policy that ballast tanks of vessels delivered after 01-07-2012, are coated with a hard coating of a light colour?																								0	20
	6300.1	For existing vessels: Are ballast tanks coated with a hard coating of a light colour?																								0	10
	6300.6	For existing vessels: Are ballast tanks coated with dark epoxy maintained with a modified epoxy coating of a light colour, after safety benefit assessment is carried out?																								0	5
	6300.7	Is the coating approved according to the IMO performance standard? (type approval or statement of compliance according to Res. MSC 215(82) in Coating Technical File)																								0	20
	6300.4	Does the company have a system which ensures an adequate level of corrosion prevention of the seawater ballast tanks? (Protective coatings provided in ballast tanks has to be in a GOOD condition)																								0	10
	6300.5	Does the company require the corrosion prevention system to be part of the vessel maintenance system?																								0	10
			Total score																						0	75	
			Minimum ranking score required for element 6300 = 40																								

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	6400	Condition Assessment Program, Maintenance Additional Green Award requirements	0				0																		
		For Owner/Managers																							
	6400.1	Is it company policy that a condition assessment for <u>Hull</u> will be carried out on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	25	
	6400.8	Is it company policy that a condition assessment for <u>Cargo Systems</u> will be carried out on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	20	
	6400.9	Is it company policy that a condition assessment for <u>Machinery</u> will be carried out on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	20	
		6400.10, 6400.11 & 6400.12 are alternatives to 6400.1, 6400.8 & 6400.9																							
		For 3rd-party Ship Managers																							
	6400.10	Is it company policy to request ship owners to carry out condition assessment for <u>Hull</u> on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	25	
	6400.11	Is it company policy to request ship owners to carry out condition assessment for <u>Cargo Systems</u> on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	20	
	6400.12	Is it company policy to request ship owners to carry out condition assessment for <u>Machinery</u> on vessels more than <u>15 years old</u> , or by the <u>end of the 3rd special survey</u> , whichever is earlier?																					0	20	
	6400.3	Is it company policy that maintenance meetings are carried out on board? (e.g. each month and at (all) sections on board)																					0	10	
	6400.4	Is a maintenance checklist used regarding the (monthly) maintenance inspection?																					0	10	
	6400.5	Is an evaluation report of vessel's performance sent to the company?																					0	20	
	6400.6	Is an annual technical report made by the Company's superintendent?																					0	15	
																							0	120	
			Total score																			0	120		
			Minimum ranking score required for element 6400 = 60																						

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7000	CREW																										
7100	Employment of Personnel																										
7100.1	Is it company policy to employ all ship-personnel on a permanent basis?																									0	30
	Alternative for 7100.1 (7100.2, 7100.3, 7100.4)																										
7100.2	Is it company policy to employ senior officers on a permanent basis?																									0	10
7100.3	Is it company policy to employ officers on a permanent basis?																									0	10
7100.4	Is it company policy to employ ratings on a permanent basis?																									0	10
																										0	30
7200	Extra Personnel, Additional Green Award Requirement																										
7200.1	Is it company policy to employ extra deck officers onboard in addition to what is required by minimum safe manning document?																									0	10
7200.7	Is it company policy to employ extra engine officers onboard in addition to what is required by minimum safe manning document?																									0	10
7200.2	Is it company policy to employ extra deck ratings onboard in addition to what is required by minimum safe manning document?																									0	10
7200.8	Is it company policy to employ extra engine ratings onboard in addition to what is required by minimum safe manning document?																									0	10
7200.3	Is it company policy to have a ship administrator onboard ? (In addition to the standard complement and extra deck-officers and -ratings above)?																									0	10
7200.4	Is it company policy to employ riding squads to carry out extensive maintenance jobs ?																									0	10
7200.9	Is it company policy that manufacturer service engineers routinely attend the vessel or provide remote monitoring assistance for maintenance/repair of technical equipment or systems ?																									0	10
7200.6	Is it company policy to hire an electrical officer in addition to the engine officers required by the safe manning document?																									0	10
																										0	80

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022																										
Revision Code	Norm item		RANKING Office - Chemical	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER/CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	7300	Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses										O														
	7300.1	Is it company policy that the 2nd officer (deck) must complete an approved advanced training for Chemical tanker cargo operations? (As a minimum, the program should comply with STCW 2010 including Manila amendments Reg V/1-1)																							0	5
	7300.2	Is it company policy that all onboard personnel are trained and qualified according to the approved Basic training for Chemical tanker cargo operations? (as STCW 2010 including Manila amendments Reg V/1-1) (If training comprises at least 3 months approved seagoing service on tankers (instead of an approved tanker familiarization course) this should include onboard computer-based training (CBT) and a documented system showing participation and qualifications).																							0	5
	7300.4	Is it company policy to provide a training for advanced fire fighting to the lower ranking deck officers (IMO 2.03) ?																							0	5
	7300.18	Is it company policy to provide a training for advanced fire fighting to the lower ranking engine officers (IMO 2.03) ?																							0	5
	7300.5	Does the company provide "onboard assessment/train the trainer" courses for the onboard management (IMO 1.30) ?																							0	10
	7300.6	Does the company provide simulator training /courses for officers involved in cargo and ballast handling (IMO 2.06) ?																							0	15
	7300.7	Does the company provide "Marine Environmental Awareness" course (IMO 1.38) for all the ship personnel?																							0	10
	7300.21	Does the company provide "Marine Environmental Awareness" course (IMO 1.38) to the technical superintendents?																							0	5
	7300.22	Does the company provide "Marine Environmental Awareness" (IMO 1.38) to the HSQE manager ?																							0	5
	7300.8	Does the company provide bridge team management/ bridge resource management training / course for all deck officers (IMO 1.22) ?																							0	5
	7300.19	Does the company provide engine room resource management training/courses for all engine officers ?																							0	5
	7300.20	<u>Alternative for 7300.8 & 7300.19</u> Does the company provide maritime resource management course for all officers ?																							0	10
	7300.9	Does the company have a structured program for refresher and updated training of company related courses at suitable intervals for office and shipboard personnel?																							0	15
	7300.10	Is it company policy to employ cadets by providing training and education in order to recruit future officers?																							0	15
	7300.14	Does the company use TOTS (Tanker Officer Training Standards) system or equivalent to monitor officers' competence, training, time in rank and as a basis for promotion?																							0	20
	7300.16	Are masters required to attend a fire training that specifically addresses chemical fires?																							0	15
	7300.17	Is it company policy that all the officers are to complete Security Awareness Training ?																							0	5
				Total score																			0	145		
				Minimum ranking score required for element 7300 = 60																						

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022																											
Revision Code	Norm item		RANKING Office - Chemical		GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS. / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	7400	Familiarization, Additional Green Award Requirements																									
	7400.1	Is it company policy that the shipboard crew after a period of absence or leave has been provided with familiarization of changes with regard to the operations/machinery which is related to their position ?																								0	20
	7400.2	Is it company policy that newly employed personnel are provided with familiarization with regard to operations/machinery which is related to their position ?																								0	20
	7400.9	Does the company have a method in which senior officers are deployed onboard within the company fleet? (eg. Senior officers returning to the same vessel)																								0	10
	7400.8	Does the company have a method in which junior officers are deployed onboard within the company fleet? (eg. Junior officers rotating among the companies fleet)																								0	10
	7400.10	In those cases when junior or senior officers are transferred to another class of ship that differ considerably from where their experience lie, is an onboard appropriate operational experience with previous off-signing officers implemented for a specific minimum period?																								0	10
	7400.4	Is it company policy that a company format handover report is requested from all off-signing officers onboard ?																								0	10
		Total score																							0	80	
		Minimum ranking score required for element 7400 = 50																									
	7500	Safe Manning and Fatigue Management																									
		A. General - managing work/rest hours																									
	7500.1	Is it a company policy that the work/rest hours performed by the individual seafarer are recorded using a software program and such records are accessible and regularly updated?																								0	5
	7500.4	Are reports of work/rest hours reviewed on regular basis ?																								0	10
	7500.2	Is there a company policy to monitor and address non compliance on STCW 2010 Manila amendments of work/rest hours ?																								0	10
		B. Fatigue management																									
RR	7500.5	Is there a company specific fatigue mitigation and control strategy (or similar document) available within the Safety Management System (SMS) to ensure the health and wellbeing of the seafarers?																								0	30
RR	7500.9	Does the fatigue mitigation and control strategy consist of the following (both): - framework to assess the hazards associated with fatigue (hazard assessment) - strategies to mitigate the risk of fatigue (risk mitigation)																								0	15
RR	7500.10	Does the company ensure that any one of the following fatigue management tools (as described in IMO MSC.1/Circ1598) is used on board GA certified ships: - Sleep Diary - Self-monitoring through fatigue and sleepiness ratings - Fatigue self-assessment tool - Fatigue event reporting																								0	15
		C. Additional questions - reporting, training & awareness																									
	7500.7	Does the company have a system in which crew members are able to report to a designated person on fatigue related issues <u>without fearing any action against them for such communication</u> ?																								0	5
	7500.11	Does the company conduct fatigue management training and awareness campaigns for shipboard crew on an initial and recurrent basis?																								0	5
		Total score																							0	95	
		Minimum ranking score required for element 7500 = 60																									

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022																											
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	9000	REQUIREMENTS ACCORDING TO ISO STANDARDS																									
	9421	ISO Certification																									
	9421.1	Is the company certified for the latest edition of ISO 9001 (quality management systems)?																									
	9421.2	Is the company certified for the latest edition of ISO 10015 (quality management – guidelines for competence management and people development)?																									
	9421.3	Is the company certified for the latest edition of ISO 14001 (environmental management systems)?																									
	9421.4	Is the company certified for the latest edition of ISO 22301 (societal security – business continuity management systems)?																									
	9421.5	Is the company certified for the latest edition of ISO 27001 (information security management systems)?																									
	9421.6	Is the company certified for the latest edition of ISO 30401 (knowledge management systems – requirements)?																									
	9421.7	Is the company certified for the latest edition of ISO 45001 (occupational health and safety management systems)?																									
	9421.8	Is the company certified for the latest edition of ISO 50001 (energy management systems)?																									
	9421.9	Does the company perform audits at planned intervals to demonstrate the conformity to the requirements of the EnMS (Energy management system) in accordance with ISO 50001:2011?																									
	9421.10	Has the company established an energy baseline using the methodology from ISO 50001:2011 with the aim to reduce the energy consumption of the organisation?																									
		Total score																									
		0 95																									
		Minimum ranking score required for element 9421 = 0																									

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022						
Norm item		TOTAL SCORE REVIEW OFFICE AUDIT - CHEMICAL TANKER	OFFICE RANKING SCORE	MAXIMUM OBTAINABLE RANKING SCORE	MINIMUM RANKING SCORE REQUIRED	ELEMENTS WITH NO MINIMUM SCORE
1000	GENERAL					
1200	Enclosed Space Entry & Hot Work		0	120	120	
1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement		0	20	10	
1400	Control of drugs & alcohol onboard		0	55	30	
1500	Emergency Response System		0	45	25	
1510	Emergency Oil Recovery		0	10	0	
1600	Computer Systems, Networks, Data Security and Training. GA requirement		0	65	40	
1610	Cyber Risk Management		0	75	35	
1700	Noise and Vibration Management		0	65	25	
1710	Underwater Noise and Vibration Management		0	30	0	
1800	Social Dimension / Sustainability		0	85	15	
2000	NAVIGATION / BRIDGE OPERATIONS					
2100	Navigation		0	120	50	
2111	Electronic chart display & information systems / ECDIS		0	60	35	
2120	Fuel Change Over / Ballast Water Exchange		0	30	30	
2300	Mooring Operations		0	10	10	
3000	MACHINERY / ENGINE OPERATIONS					
3100	Bunker Operations		0	50	50	
3200	Fuel oil management		0	120	60	
4000	CARGOES / CARGO OPERATIONS					
4100	Chemical Tanker Cargo Operations & Additional Green Award requirements		0	140	140	
5000	PREVENTION OF POLLUTION					
5100	Biofouling Management		0	30	5	
5200	Waste Management / Garbage Handling Onboard		0	80	30	
5410	NOx Emissions		0	95	35	
5420	SOx Emissions		0	120	20	
5421	Ships required to carry out Fuel Change Over to low sulphur MARINE DIESEL OIL or low sulphur MARINE GAS OIL (low sulphur Distillates)		0	40	40	
5430	Particulate Matter (PM) Emissions		0	30	0	
5440	Greenhouse Gas (GHG) Emissions - CO2 Emissions		0	200	0	
5441	Greenhouse Gas (GHG) Emissions - Methane (CH4) Emissions - Main Propulsion		0	55	0	
5450	Newbuild policy		0	40	0	
5460	Environmental Ship Index (ESI)		0	50	0	
5500	Sewage Management		0	50	20	
5510	Grey Water Management		0	25	0	
5700	Ballast Water Management		0	60	20	
5801	Protection of fuel oil tanks, lube oil tanks and hull		0	30	0	
5810	Stern tube lubrication		0	60	0	

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - CHEMICAL TANKER - VERSION 2022						
Norm item		TOTAL SCORE REVIEW OFFICE AUDIT - CHEMICAL TANKER	OFFICE RANKING SCORE	MAXIMUM OBTAINABLE RANKING SCORE	MINIMUM RANKING SCORE REQUIRED	ELEMENTS WITH NO MINIMUM SCORE
5811	Mooring wire lubrication		0	20	0	
5812	Deck equipment lubrication (use of oils)		0	55	0	
5820	Management of bilge water and sludge handling onboard		0	25	15	
5821	Outfitting of bilge water system		0	50	20	
5822	Outfitting of sludge handling system		0	20	10	
5900	Ship Recycling - Inventory of Hazardous Materials		0	100	40	
5910	Ship Recycling - Policy for ships due to be recycled		0	140	60	
6000 MAINTENANCE / SURVEYS						
6100	Programme of Inspections		0	70	60	
6110	Critical and Stand-by Equipment		0	75	30	
6200	Mooring Equipment		0	75	45	
6300	Corrosion Prevention of Seawater Ballast Tanks		0	75	40	
6400	Condition Assessment Program, Maintenance Additional Green Award requirements		0	120	60	
7000 CREW						
7100	Employment of Personnel		0	30	0	
7200	Extra Personnel, Additional Green Award Requirement		0	80	40	
7300	Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses		0	145	60	
7400	Familiarization, Additional Green Award Requirements		0	80	50	
7500	Safe Manning and Fatigue Management		0	95	60	
9000 REQUIREMENTS ACCORDING TO ISO STANDARDS						
9421	ISO Certification		0	95	0	
	TOTAL SCORES		0	3415	1435	

LEGEND

o	Indicates which crew/employee may be interviewed/questioned.
	Shows that a certain item is complied.
	Shows that a certain item is <i>not</i> complied.
0	Indicates that an alternative is used, hence the score for that item is a "0".
	The checklist was filled in incorrectly, thus shows "error".
0	Indicates that the whole element did not reach the minimum score, hence a finding is issued. The number shows the scores obtained.
	Shows which elements are minimum = maximum. Hence scores on all items is required to fully comply.
	Indicates that the minimum score for the relevant element is "0", hence a finding will <i>not</i> be issued.

* for detailed interpretations of the colours and the usage of the checklist, please refer to the pdf-file named "Instruction Notes" located on www.greenaward.org under "Certification/ Download".

ENERGY EFFICIENCY TECHNOLOGIES INFORMATION PORTAL

TECHNOLOGY GROUPS

[IMO GLOMEEP Website](#)

GA Code:

Certificate Holder name:

Date of Office Audit:

MACHINERY TECHNOLOGIES

This technology group includes measures that improve the energy efficiency of main and auxiliary engines. These include measures such as auxiliary systems optimization, optimizing heat exchangers, waste heat recovery systems, electronic auto-tuning, batteries and other solutions.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Auxiliary systems optimization	Optimizing auxiliary systems to actual operational profiles, not design conditions	Semi-mature	All vessels
	Engine de-rating	De-rating an engine for reduction of the vessel's maximum speed to increase its efficiency by limiting the potential power output	Semi-mature	Vessels sailing 10-15% slower than design speed
	Engine performance optimization (automatic)	Automatic increase of engine efficiency through testing and tuning according to actual operational load and conditions	Semi-mature	Mainly for two stroke engines
	Engine performance optimization (manual)	Manual increase of engine efficiency through testing and tuning according to actual operational load and conditions	Mature	All vessels
	Exhaust gas boilers on auxiliary engines	Exhaust gas boilers recover the heat from the exhaust gas of auxiliary engines to generate steam, hot water or heat for process heating	Semi-mature	Vessels without shaft generator
	Hybridization (plug-in or conventional)	Use of electricity to replace various modes of power consumption	Semi-mature	Vessels with large fluctuations in power output (ferries, offshore vessels, tugs)
	Improved auxiliary engine load	Increase of the auxiliary engines' load and efficiency by reducing the number of auxiliary engines running	Semi-mature	All vessels
	Shaft generator	Produce electricity from the main propulsion engine	Mature	All vessels with high power needs and long transits
	Shore power	Use of cold ironing in ports to reduce fuel consumption on power producing engines	Semi-mature	For smaller vessels and in ports with developed solutions for larger vessels
	Steam plant operation improvement	Improve operations and maintenance of steam plant system saving fuel on oil fired boiler	Mature	Mainly crude and product tankers
	Waste heat recovery systems	Recover thermal energy from the exhaust gas and convert it into electrical energy	Semi-mature	All vessels with engines above 10 MW

PROPULSION AND HULL IMPROVEMENTS

Technologies in this group focus on improving the hydrodynamic performance of the vessel. This includes solutions that reduce the resistance of the vessel and/or also improve the propulsive efficiency of the vessel. Examples include measures such as propeller polishing, hull cleaning, PIDs (Propulsion Improving Devices), air lubrication and more.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Air cavity lubrication	Use of air injection on the wetted hull surfaces to improve a ship's hydrodynamic performance	Semi-mature	Most vessels in deep sea trade
	Hull cleaning	Removal of fouling on the hull to increase the vessel's hydrodynamic performance	Mature	All vessels
	Hull coating	Reduction of the hull's resistance through water	Mature	All vessels
	Hull form optimization	Optimizing the hull for lower resistance through water	Mature	All vessels
	Hull retrofitting	Retrofitting of the bulbous bow, optimizing thruster tunnels or bilge keel to reduce resistance	Mature	All vessels
	Propeller polishing	Removal of fouling on the propeller	Mature	All vessels
	Propeller retrofitting	Retrofitting the propeller to increase efficiency	Semi-mature	All vessels
	Propulsion Improving Devices (PIDs)	Installation of propulsion improving devices	Mature	All vessels

ENERGY CONSUMERS

Consumers are equipment or devices that use energy when operated. Technologies in this group focus on minimizing the energy consumption by improving the device or optimizing the utilization of the device. Examples of measures in this group are frequency controllers, cargo handling systems, low energy lighting and more.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Cargo handling systems (Cargo discharge operation)	Reduction of energy consumption while discharging crude oil by use of model-based studies of the discharge operation	Semi-mature	Tankers
	Energy efficient lighting system	Use of energy efficient lighting equipment, such as LED light, to increase efficiency and remove heat loss from light devices	Mature	All vessels
	Frequency controlled electric motors	Regulating the frequency of the motors in order to adapt the motor optimized load	Mature	All vessels

ENERGY RECOVERY

Technologies in this group focus on capturing energy from the surroundings of the vessel and using or transforming this to useful energy for the vessel. This involves measures such as application of kites, fixed sails or wings, Flettner rotors, or solar panels.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Fixed sails or wings	Use sails or wings to replace some of the propulsion power needed	Not mature	Vessels with enough place on deck (general cargo, tankers, bulkers)
	Flettner rotors	Use Flettner rotors to generate power from wind energy	Not mature	Dependent on trading area and sufficient free deck-surface
	Kite	Use a kite to replace some of the propulsion power needed	Not mature	All vessels
	Solar panels	Install solar panels for conversion of solar energy to electricity	Not mature	Dependent on trading area and sufficient free deck-surface

TECHNICAL SOLUTIONS FOR OPTIMIZING OPERATION

Technologies in this group focus on improving the operation of the vessel more than improving the vessel itself. The list of suggested measures includes both technologies and suggestions for best practice (without direct application of a technology). Measures in this group include trim and draft optimization, speed management, autopilot adjustment and use, combinator optimizing, and others.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Autopilot adjustment and use	Use of an automatic system to control the vessel's rudder in a more energy efficient manner	Mature	All vessels
	Combinator optimizing	Use of optimized pitch settings and propeller speed for optimized efficiency of propulsion system	Mature	For vessels with controllable pitch propeller
	Efficient DP Operation	Optimize the operation in DP mode	Semi-mature	Vessels with DP mode
	Speed management	Management of the vessel's speed in the most efficient manner	Semi-mature	All vessels
	Trim and draft optimization	Optimizing the trim and draft to reduce the vessel's water resistance	Semi-mature	All vessels
	Weather routing	Including weather conditions when planning a voyage	Mature	All vessels

Definitions of maturity levels according to uptake across the maritime industry, and degree of proven technology/principle

Mature	Proven, new or existing technology/principle, with high uptake across the industry.
Semi-mature	Proven, new or existing technology/principle, but with limited uptake across the industry.
Not mature	New unproven-, unproven existing-, or proven existing technology/principle but with very few installations and little to no operational experience.

*This Information Portal is still under development and further images will be added.

This Energy Efficiency Technologies Information Portal was developed in cooperation with DNV GL.

This webpage serves as an Information Portal for Energy Efficiency Technologies for Ships. IMO does not make any warranties or representations as to the accuracy or completeness of the information provided.

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APPENDIX 3

CHECKLIST - BASIC CRITERIA - SHIP SURVEY - CHEMICAL TANKER

(CMC-08)

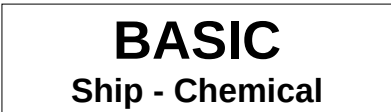
CHECKLIST - BASIC CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022

Revision Code	Norm item		BASIC Ship - Chemical	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE
	100	MANAGEMENT ELEMENTS																		
	101	GENERAL																		
	101.1	Are the Management System (MS) Manuals maintained and updated?																		
	102	SAFETY AND ENVIRONMENTAL PROTECTION POLICY																		
	102.1	Is the company policy concerning safety and the environment available, posted and implemented at all levels?																		
	103	COMPANY RESPONSIBILITIES AND AUTHORITY																		
	103.1	Are the responsibilities and authorities of all shipboard personnel clearly defined and implemented?																		
	103.2	Are shore-ship communications, defined levels of authority and lines of communication documented and working effectively ?																		
	104	DESIGNATED PERSONS																		
	104.2	Is (are) (a) designated person(s) known on board?																		
	104.3	Is objective evidence available that safety and environmental aspects of the operation of the ship are monitored and that the required adequate resources and shore-based support is applied ?																		
	105	MASTER'S RESPONSIBILITY AND AUTHORITY																		
	105.1	Is the responsibility of the master clearly defined and documented?																		
	105.2	Does the master implement the Company's safety and environmental-protection policy on board?																		
	105.3	Does the master motivate the crew in the observation of that policy?																		
	105.4	Does the master verify that specified requirements are observed?																		
	105.5	Does the master review the MS and are its deficiencies reported to the shore-based management?																		
	106	RESOURCES AND PERSONNEL AND STCW																		
	106.1	Does the company have a procedure for the Master to ensure that assigned sea staff are in possession of necessary certificates when joining the vessel?																		
	106.4	Are shipboard personnel informed about new/revised rules, regulations, codes and guidelines?																		
	106.6	Does ship's personnel receive training/courses which are required in support of the MS?																		
	106.11	Is the working language between the office and the vessels defined?																		
	106.12	Are all senior and deck officers conversant in the English language for maritime communication?																		
	106.13	Is relevant information on the MS written in a working language or languages understood by officers and shipboard personnel?																		
	106.14	Is the working language monitored and checked by the ship's staff?																		
	106.15	Are new personnel and personnel transferred to new assignments, given proper familiarisation with their duties?																		
	106.16	Are instructions, which are essential prior to sailing, identified, documented and given to the new personnel?																		
	106.17	Is the Master fully conversant with the Company's Management Systems?																		

CHECKLIST - BASIC CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022

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	107 DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS		☒		☒						☒						☒		
	107.2 Are plans and instructions for key shipboard operations concerning safety of the ship and prevention of pollution, evaluated and reviewed?																		
	107.3 Are tasks, qualifications and responsibilities defined in the manuals and in the job descriptions?																		
	108 EMERGENCY PREPAREDNESS		☒		☒	☒		☒		☒		☒		☒		☒	☒		
	108.1 Does the system cover the arrangements needed to ensure that the company, day and night, can be notified if a hazard, accident or emergency involving the ship occurs ?																		
	108.2 Are tasks, qualifications and responsibilities evaluated during drills and exercises as described in the emergency procedures?																		
	108.3 Is communication with media described in the emergency procedures and is shipboard personnel aware of these instructions?																		
	108.5 Is the shipboard personnel prepared to respond to emergency shipboard situations?																		
	109 REPORTS AND ANALYSES OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURENCES		☒		☒						☒						☒		
	109.1 Are safety and environmental inspections carried out, documented and reported?																		
	109.2 Does the ship have instructions/procedures for the reporting of non-conformities/ near misses?																		
	109.3 Are non-conformities, accidents and hazardous occurrences reported to the office?																		
	109.4 Are corrective and/or preventive actions taken?																		
	109.5 Does the company have objective evidence to show their support of the shipboard personnel in reporting of non-conformities / near misses?																		
	110 MAINTENANCE OF THE SHIP AND EQUIPMENT		☒		☒						☒						☒		
	110.1 Are ship inspections held at defined intervals? (minimum of twice a year or equivalent)																		
	110.2 Are non-conformities reported including their possible cause?																		
	110.3 Is appropriate corrective action taken?																		
	110.4 Are records of these activities maintained?																		
	110.5 Are ship-critical equipment and technical systems identified?																		
	110.6 Does the MS provide for specific measures aimed at promoting the reliability of critical equipment and systems ?																		
	111 DOCUMENTATION		☒		☒						☒								
	111.1 Does the company have procedures to control documents and data relevant to the MS?																		
	111.2 Are valid documents available at all relevant locations?																		
	111.3 Are changes to documents reviewed and approved by authorised personnel?																		
	111.4 Are obsolete documents promptly removed ?																		
	112 COMPANY VERIFICATION, REVIEW AND EVALUATION		☒		☒						☒								
	112.1 Are internal audits carried out to verify whether safety and pollution-prevention activities, and other procedures, comply with the MS?																		
	112.4 Are results of the audits and reviews brought to the attention of all shipboard personnel having responsibility in the area involved?																		

CHECKLIST - BASIC CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022

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		IMO ELEMENTS																	
	200	SOLAS 1974																	
	201	SOLAS General Provisions	o								o								
	201.1	Compliance with General Provisions																	
	201.2	Compliance with the IBC code																	
	213	Certificates and documents on board	o								o								
	213.1	Are all regulatory certificates valid ?																	
	216	Maritime security	o																
	216.1	Does the ship have a valid (interim) International Ship Security Certificate?																	
	216.2	Is the ship's crew familiarised in general with the principles of the ISPS Code (ship related) ?																	
	217	Safety of Navigation / SOLAS chart carriage requirements	o				o												
		Alternative 1 (217.1 - 217.4) : Compulsory carriage of ECDIS, with full official ENC coverage																	
	217.1	Is the ECDIS type-approved according to Res A 817(19) as amended by MSC 64 (67) and MSC 86 (70) or MSC.232(82)?																	
	217.3	Is an acceptable back-up arrangement in place? (an independent type-approved ECDIS with an independent position fixing system using official Electronic Navigational Charts (ENC's), or a full / reduced folio of up-to-date paper charts as relevant to the ship's voyage)																	
	217.4	Are all official ENCs up-to-date?																	
		Alternative 2 (217.1 - 217.4): Compulsory carriage of ECDIS, Navigation with official ENCs where available and official RNCs where ENCs are not available																	
	217.1	Is the ECDIS type-approved according to Res A817 (19) as amended by MSC 64 (67) and MSC 86 (70) or MSC.232(82)?																	
	217.2	Is the supplementary folio of paper charts acceptable for that part of the voyage where official RNCs are used ?																	
	217.3	Is an acceptable back-up arrangement in place? (an independent type-approved ECDIS with an independent position fixing system using official ENCs and Raster Navigational Charts where needed, or a full / reduced folio of up-to-date paper charts, as relevant to the ship's voyage)																	
	217.4	Are all official ENCs and RNCs up-to-date?																	
		Training & Onboard Use of ECDIS (Compulsory carriage of ECDIS)																	
	217.5	Have all deck officers and the master completed generic training in the use of ECDIS based on the IMO model course 1.27?																	
	217.7	Is a risk assessment carried out for the operation of ECDIS which identifies and controls the hazards when using ENCs and (if used) when ECDIS is in RCDS mode?																	
	217.8	Are results from the assessment evident in the onboard procedures + instructions for ECDIS?																	
	217.9	Is the risk assessment and relevant onboard procedures + instructions reviewed on a regular basis (at least once a year or if circumstances require a review) ?																	

CHECKLIST - BASIC CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022

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218	Noise Levels On Board Ships																		
	(Only applicable to new ships (ships contracted to build on or after 1st July 2014) of a gross tonnage of 1,600 and above.)																		
218.1	Is the noise survey report available onboard?																		
218.2	Are noise areas marked by placing relevant visible warning notices at the entrance to these areas? (IMO noise symbols)																		
300	MARPOL 73/78																		
301	Provisions concerning Reports on Incidents Involving Harmful Substances (Protocol 1)																		
301.1	Does the Master have a procedure in order to report an incident to the nearest coastal state?																		
310	Prevention of pollution by oil																		
310.2	Is SMPEP maintained and updated for oil pollution emergency procedures?																		
310.5	Are updated contact lists of coastal States, port contacts and ship interest contacts available?																		
310.6	Does the company have a policy concerning the retention and disposal of oil residues (sludge)?																		
310.8	Are actions and responsibilities of the shipboard personnel clearly described in oil pollution emergency procedures of the SMPEP ?																		
310.9	Does the plan provide procedures for the removal of oil spilled and contained on deck?																		
310.10	Does the plan provide guidance to ensure proper disposal of removed oil and clean-up materials?																		
320	Prevention of pollution by cargo																		
320.2	Is the shipboard marine pollution emergency plan maintained and updated?																		
320.8	Are actions and responsibilities of the shipboard personnel clearly described in the SMPEP ?																		
320.9	Does the plan provide procedures for the removal of product spilled and contained on deck?																		
320.10	Does the plan provide guidance to ensure proper disposal of removed product and clean-up materials?																		
320.11	Does the plan include a list of information required for making damage stability and damage longitudinal strength assessments?																		
320.12	Is a Procedures and Arrangements manual flag-approved? (per ship)																		
350	Prevention of pollution by garbage																		
350.2	Does the vessel have a ship specific garbage management plan detailing the specific ship's equipment, arrangements and procedures for the handling of garbage?																		
350.3	Are records kept according to the garbage management plan?																		
400	Specialised Chemical Tanker Training																		
400.2	Have the Master, CO, CE, + 2nd Engineer completed an approved advanced training for chemical tanker cargo operations? (As a minimum, the program should comply with STCW 2010 including Manila amendments Reg V/1-1)																		

APPENDIX 4

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER

(CMC-09)

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																								
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	1000	GENERAL																						
	1200	Enclosed Space Entry & Hot Work																						
	1200.1	Is there an Enclosed Space Entry and Hot Work permit to work system, taking account of IMO and industry guidelines and where relevant local port / terminal requirements?																				0	10	
	1200.6	Is company approval of the Hot Work permit required before work can begin?																				0	10	
	1200.7	Does the Hot Work permit show the appropriate safety precautions to be taken relevant to the location of work?																				0	5	
	1200.2	Is crew on board provided with suitable personal protective equipment and suitable equipment for testing the atmosphere of an enclosed space? (e.g. breathing apparatus, protective clothing and approved + calibrated atmosphere testing equipment)																				0	5	
	1200.14	Are all personnel entering an enclosed space provided with a personal gas detector which can measure oxygen?																				0	5	
	1200.15	Is the enclosed space tested for HC and related cargo vapours before entering?																				0	5	
	1200.9	Is a safety meeting, attended by all personnel involved, held prior to entering the space or commencement of hot work in order to review procedures and PPE (including those specific for the intended work) ?																				0	10	
	1200.10	Is a responsible officer designated for all aspects of the operation?																				0	5	
	1200.3	Is ship's crew trained and drilled periodically according to enclosed space entry procedures ?																				0	5	
	1200.4	Does training also include rescue and first aid?																				0	5	
	1200.11	Is a rescue / back-up team assigned and ready for immediate action upon call?																				0	5	
	1200.5	Is there an appropriate procedure in place for entering the pump room ?																				0	10	
																						0	80	
	1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement																						
	1300.1	Does the vessel have a compressor for the refilling of air cylinders for breathing apparatus?																				0	20	
	1300.2	Alternative for 1300.1: sufficient number of air cylinders for the sole purpose of safety drills.																				0	10	
																						0	20	

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																								
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	1400	Control of drugs & alcohol onboard			0						0				0				0					
	1400.2	Is evidence of an unannounced alcohol testing initiated by the office available on board? (Approved test equipment to be available on board)																				0	10	
	1400.1	Have all current crew members been subjected to shore-based drug and alcohol testing at least once in last 12 months?																				0	15	
	1400.5	Has the vessel been subjected to unannounced drug and alcohol testing at least once every year (not exceeding 18 months between two consecutive tests) by an external organisation?																				0	10	
	1400.6	Alternative to 1400.1 & 1400.5: In case crew members are not subject to shore-based drug and alcohol testing at least once in last 12 months, has the vessel been subjected to unannounced drug and alcohol testing at least twice in 12 months by an external organisation?																				0	25	
	1400.4	Have all crew members been tested for effects of carried cargoes during a medical examination?																				0	10	
																						0	45	
			Minimum ranking score required for element 1400 = 30																					
	1500	Emergency Response System			0		0		0				0		0									
	1500.4	Is the vessel in receipt of evaluation reports of the annual ERS drill(s) between company, (class) and vessel?																				0	5	
	1500.11	Is the evaluation report of the annual ERS drill discussed in a safety meeting?																				0	10	
	1500.5	Is an annual drill performed on board which includes ERS-procedures?																				0	15	
																						0	30	
			Total score																					
			Minimum ranking score required for element 1500 = 15																					
	1510	Emergency Oil Recovery																						
	1510.1	Is the vessel equipped with a system providing emergency access to cargo tanks and bunker tanks (for example, from the vessel deck), should the vessel be submerged?																				0	5	
	1510.2	Does the ship carry an oil skimmer or a similar device that can be used in an emergency situation of oil spill overboard?																				0	5	
																						0	10	
			Total score																					
			Minimum ranking score required for element 1510 = 0																					

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																												
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1600	Computer Systems, Networks, Data Security and Training. GA requirement																											
1600.1	Are arrangements for vessel systems documented ? (configuration scheme)																		0	10								
1600.7	Are adequate system back-up's for vessel computer-based systems made (where applicable) and are procedures for this documented ?																		0	5								
1600.8	Are adequate back-ups for administrative PC systems made and are procedures for this documented ?																		0	5								
1600.3	Is training provided at a level required to effectively operate and maintain the system and cover normal, abnormal and emergency conditions?																		0	10								
1600.4	Is the internal audit scheme applicable to the IT elements and vessel computer-based systems?																		0	10								
1600.5	Are computer systems, in relation to IMO MSC/Circ.891, certified by a recognised organisation?																		0	10								
1600.6	Is a system administrator designated onboard for administrative PC systems on the ship?																		0	10								
			Total score															0	60									
			Minimum ranking score required for element 1600 = 30																									
1610	Cyber Risk Management																											
1610.1	Is shipboard crew aware of plans and procedures of cyber risk management (as described in SMS) and their implementation on board?																		0	10								
1610.4	Does the cyber risk policy focus on elements such as third-party access and bring your own device (BYOD) in the office?																		0	5								
1610.5	Is there a designated shipboard crew member on board appropriately trained to identify and respond to cyber threats to the ship's information and operational technology systems?																		0	5								
1610.8	Does the vessel undergo cyber risk assessment (at an interval deemed suitable by the company) by means of either of the following: - self-assessment followed by third party risk assessment - penetration tests of critical IT and OT infrastructure performed by external experts simulating cyber attacks?																		0	5								
1610.9	Does the vessel have access to contingency plans and related information in a non-electronic form that need to be followed in the event of a cyber attack?																		0	5								
1610.12	Are on-board systems forbidden to be remotely accessed by technicians and manufacturers without authorization by the vessel's senior leadership team (For example, by following a two-step digital authorization process)?																		0	5								
			Total score															0	35									
			Minimum ranking score required for element 1610 = 15																									

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																								
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	1700	Noise and Vibration Management																						
		Noise/Vibration Monitoring and Measures																						
	1700.2	Is the crew wearing hearing protectors which meet the requirements of the HML(High-Medium-Low) method (ISO 4869-2:1994) when entering spaces where noise levels exceed 85db(a)?																		na	0	0		
	1700.3	Does the PMS have the routine to inspect and rectify any abnormalities in terms of noise and vibration from a machinery equipment ?																			0	5		
	1700.4	Are appropriated measures implemented onboard in order to protect the crew from cargo handling equipment noise if the noise exceeds 85db(a) (by taking into account technical solutions and/or exposure limits)?																			0	10		
		Noise Mitigation and Health Hazards																						
	1700.8	Is the noise exposure limit of each rating/officer recorded and available onboard?																			0	5		
	1700.9	Is the crew restricted towards prolonged exposure in spaces where noise limits exceed 110 db(a)?																			0	5		
	1700.10	Are all engine exhaust pipes insulated with ship specific suitable silencers to attenuate noise?																			0	5		
	1700.11	Is the ship installed with noise cancelling equipment such as active mufflers/mounts, resilient mounts, vibration dampers where practically possible?																			0	10		
	1700.12	Are noise cancelling measures such as mineral wool/silencers being installed in the ventilation ducts or fan rooms to reduce the noise level?																			0	10		
						Total score																0	50	
						Minimum ranking score required for element 1700 = 15																		
	1710	Underwater Noise and Vibration Management																						
	1710.1	Were any measures implemented periodically to reduce cavitation from propeller?																			0	5		
	1710.4	Does the ship opt for re-routing or slow steaming where possible and practicable to protect whale sensitive areas?																			0	5		
						Total score																0	10	
						Minimum ranking score required for element 1710 = 0																		

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																							
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	1800	Social Dimension / Sustainability																					
		A. Good Health & Well-Being																					
	1800.1	Does the vessel have an ITF or similar agreement in place?																				0	10
	1800.3	Is an electronic device available on board specifically to access digital platform (web or app) subscribed by the company for seeking medical advice?																				0	5
	1800.4	Has the shipboard staff been familiarized with platforms (online/offline) providing access to emotional support networks to tackle mental health issues?																				0	5
	1800.5	Do all shipboard personnel have access to the internet at all times?																				0	5
		B. Reduced Inequalities / Equal Opportunities / Diversity																					
		B.1 General																					
	1800.7	Have all ship board personnel been made aware of confidential reporting procedures to report harassment & discrimination?																				0	5
	1800.8	Have steps been taken to create awareness among shipboard staff and to ensure effective implementation of policies focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc.?																				0	5
		B.2 Gender-specific																					
	1800.10	Does the vessel have women seafarer(s) working either as officers or ratings?																				0	10
	1800.11	Is the ship equipped with the following specific facilities for women seafarers: – feminine hygiene items (in bonded stores) & separate disposal facilities – separate washrooms with sanitary facilities – suitable sized (gender specific) safety and protective clothing – access to medical supplies without having to consult male colleagues																				0	5
						Total score																0	50
						Minimum ranking score required for element 1800 = 10																	

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2000	NAVIGATION / BRIDGE OPERATIONS																								
2100	Navigation																								
2100.3	Does the voyage or passage plan include contingency planning?																								
2100.6	Is the vessel automatically supplied with new hydrographic publications?																								
2100.7	Is the vessel electronically updated for hydrographic publications? (eg. Temporary and Preliminary NtM)																								
2100.8	Is navigational equipment included in the electronic Planned Maintenance System?																								
2100.9	Are masters entitled to use non-compulsory pilot services? (must be stated in a company procedure)																								
2100.13	Is the vessel using weather routing services while on long haul voyage?																								
2100.18	Is the vessel enrolled in a meteorological & oceanographic service in a form of a software application?																								
2100.19	Alternative to 2100.18: Does the vessel have a capability to receive comprehensive weather information from the office or from coastal stations / platforms?																								
2100.15	Is the vessel equipped with the multi constellation GNSS receiver?																								
2100.16	Is the vessel equipped with the eLoran receiver?																								
2100.17	Is the position for all stages of voyage compared with a different method of positioning than GPS?																								
																						Total score		0	120
																						Minimum ranking score required for element 2100 = 40			
2111	Electronic chart display & information systems / ECDIS																								
Applicable to ships for which carriage of ECDIS is compulsory																									
2111.4	Is ECDIS hardware maintained and software updated?																								
2111.5	Is ECDIS tested according to the IHO ECDIS data presentation and performance check with a use of test data set after every update of the software (including back up)?																								
2111.6	Is the crew regardless of the generic training familiarized with the ECDIS unit(s) installed onboard according to the Industry Recommendations for ECDIS Familiarisation?																								
2111.7	Have all the officers completed structured ECDIS training(s) on top of the generic training (besides the familiarization onboard in R2111.6)?																								
2111.10	Does the voyage planning include checking if all needed charts are up-to-date (latest edition official chart updated and corrected to the latest available updates and NtM)?																								
2111.11	Does the ECDIS procedure suggest display settings (layers) of ECDIS for various navigation conditions (arrival / departure - coastal - deep sea)?																								
2111.12	Does the vessel have a basic folio of paper charts (in case second ECDIS is a back up system)?																								
																						Total score		0	55
																						Minimum ranking score required for element 2111 = 30			

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	2120	Fuel Change Over / Ballast Water Exchange			0		0		0															
	2120.1	Does the voyage plan (checklist) include when fuel change over <u>should</u> be carried out?																				0	10	
	2120.2	Does the voyage plan (checklist) include when ballast water exchange <u>can</u> be carried out?																				0	10	
	2120.3	Does the voyage plan (checklist) include when tank wash procedures <u>cannot</u> be carried out?																				0	10	
																						0	30	
					Minimum ranking score required for element 2120 = 30																			
	2200	Helicopter / Ship Operations					0		0															
	2200.1	Are crew members who are involved in helicopter/ship operations trained in standards and procedures?																				0	10	
	2200.2	Is an action plan in case of a helicopter accident available?																				0	10	
					Total score																			
																						0	20	
					Minimum ranking score required for element 2200 = 20																			
	2300	Mooring Operations			0		0				0													
	2300.1	Does the company give procedures/instructions for mooring/unmooring operations?																				0	10	
	2300.2	Is new crew familiar with the operation and capabilities of the ship's mooring equipment?																				0	10	
	2300.3	Are specific mooring plans which have been used at certain terminals recorded?																				0	20	
	2300.4	Is a drawing of the mooring arrangement readily available on the bridge?																				0	10	
					Total score																			
																						0	50	
					Minimum ranking score required for element 2300 = 30																			

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3000	MACHINERY / ENGINE OPERATIONS																						
3100	Bunker Operations																						
3100.1	Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%)																					0	10
3100.2	Is a checklist used for bunker operations (company format) ?																					0	10
3100.3	Does the bunker procedure include a bunker plan (company format) ?																					0	10
3100.4	Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks?																					0	10
3100.5	Is there an instruction that all persons involved are to be familiar with the intended bunker operation and/or internal transfer operation and their duties?																					0	10
			Total score																			0	50
			Minimum ranking score required for element 3100 = 50																				
3101	Bunker Operations - LNG																						
3101.1	Is the ship mandated to use only a relevant IAPH LNG bunkering checklist - either by company SMS or by instructions from charterer / port authority?																					0	10
3101.2	Do shipboard personnel make use of LNG specific PPEs such as protective cryogenic gloves and safety goggles with side protection during LNG bunkering operations?																					0	10
3101.3	Are ship's LNG bunker stations equipped with CCTV for the purpose of observing the bunkering operation from the bridge or operation control room?																					0	10
3101.4	Does a designated shipboard personnel provide a dedicated watch (from a safe location) on bunker station during the entire duration of the LNG bunkering?																					0	5
3101.5	Does the ship use thermal imaging camera/equipment for leakage detection of LNG during bunkering?																					0	5
3101.6	Have relevant shipboard personnel completed a shore-based training on LNG bunkering?																					0	10
			Total score																			0	50
			Minimum ranking score required for element 3101 = 25																				

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	3200	Fuel oil management																			
		B.Sampling & Testing																			
		B.1 MARPOL delivered fuel oil sampling																			
	3200.11	Is all fuel oil sampling (during bunkering) carried out using an automatic sampler (time or flow proportional) in accordance with MARPOL Annex VI?																0	10		
		B.2 In-use fuel oil sampling																			
	3200.16	Are fuel oil samples drawn from the following designated sampling points at least once every four months for testing of catalytic fines & separator efficiency at a recognized fuel analysis organization ashore? 1. at engine inlet 2. before separator 3. after separator																0	10		
		B.3 Testing																			
	3200.1	Is bunkered fuel oil always tested (before use onboard) by a recognized fuel analysis organization ashore in accordance with the requirements of ISO 8217 standard?																0	40		
		C. Operational procedures																			
	3200.17	Is the commingling of two different bunkers (even of the same grade of fuel) prohibited?																0	10		
	3200.18	For the situations where commingling of two different fuels is unavoidable, does the relevant ship crew implement the company prescribed commingling procedure to determine the compatibility of two bunkers (including the reference test methods)?																0	5		
		D. Additional questions																			
	3200.19	Are the copies of valid certificate of quality (COQ) and associated laboratory analysis reports for the recently bunkered fuel oil available on board?																0	5		
																		0	80		
			Total score																0	80	
			Minimum ranking score required for element 3200 = 40																		

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																							
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4000	CARGOES / CARGO OPERATIONS																						
4100	Chemical Tanker Cargo Operations & Additional Green Award requirements																						
4100.1	Is it company procedure that the ship shore safety checklist has to be used before loading/unloading operations?																					0	10
4100.2	Does the company provide instructions/procedures to control the access of unauthorised persons on board?																					0	20
4100.18	Does the company have cargo related safety instructions for visitors? (access on board, PPE, access on deck; all in relation to nature of cargo)																					0	15
4100.4	Does the company give procedures/instructions in relation to the entire cargo operations?																					0	10
4100.20	Does the Shipping Document contain cargo specifications as required by the IBC code?																					0	5
4100.21	Are relevant Shipping Documents distributed to the respective vessels prior cargo loading operations?																					0	5
4100.6	Does the company distribute relevant cargo instructions to the vessel? (e.g. is ship compatible for intended cargo?)																					0	10
4100.7	Are there procedures to ensure that a sufficient number of personnel is available in case of emergency during port stay?																					0	20
4100.10	Is there an effective deck watch in attendance on deck during cargo operations?																					0	10
4100.11	Is a plan for the intended cargo operations available?																					0	10
4100.12	Is a terminal emergency plan available on board? (CCR)																					0	10
4100.27	Is data for the last 3 cargoes carried in vessel's tanks recorded and available on board?																					0	15
																						0	140
			Minimum ranking score required for element 4100 = 130																				
4200	Ship to Ship Transfer Operations																						
4200.1	Is a STS safety drill carried out not more than seven days preceding a STS transfer operation?																					0	10
4200.4	Alternative for 4200.1: (for vessels not engaged in regular STS operations) In case the ship is ordered to lighter, are there procedures / guidelines in the SMS to familiarise relevant crew members with the STS safety drill & is there an instruction to carry out the drill not more than 7 days before commencing operations?																					0	10
4200.2	Also for vessels not engaged in regular STS operations in case the ship is ordered to lighter : Are the checklists as described in the Ship to Ship Transfer Guide available for use?																					0	10
4200.3	Also for vessels not engaged in regular STS operations in case the ship is ordered to lighter : Are company guidelines available to develop (or assess) a STS contingency plan, including all possible risks and actions to be taken to avoid emergencies? (Plan should take the geographical location of the operation, local requirements & support in local area into account. Plan must be agreed between both vessels and local organisers)																					0	10
																						0	30
			Total score																				
			Minimum ranking score required for element 4200 = 30																				

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	4300	Tank Cleaning Operations		0		0																	
	4300.3	Are tank cleaning instructions available for each of the cargoes carried on board (does the vessel management have access to the relevant tank cleaning instructions)?																			0	20	
	4300.4	Are crew members assigned to be involved in tank cleaning during TCO given familiarisation with tank cleaning instructions and did they receive (CBT) Chemical Tank Cleaning Operations Training?																			0	10	
																					0	30	
			Minimum ranking score required for element 4300 = 30																				
	4400	Additional Green Award Requirements (tank alarms, coatings, etc.)				0																	
	4400.1	Is the measuring system for cargo, bunker and ballast tanks on line with the loadicator?																			0	20	
	4400.2	Are all cargo tanks fitted with high and high-high level alarms?																			0	10	
	4400.3	Is each cargo tank fitted with an independent overfill alarm?																			0	10	
		Cargo residue																					
	4400.15	For vessels constructed before 01-01-2007: Are cargo residues Cat x,y,z max 75 ltr for each tank? (50 ltr tolerance)																			0	20	
	4400.16	For vessels constructed on or after 01-01-2007: Are cargo residues Cat x,y,z max 50 ltr for each tank?																			0	15	
	4400.17	Are all cargo tank discharge outlets arranged under the waterline?																			0	15	
	4400.18	Is vessel arranged with dedicated slop tanks?																			0	20	
	4400.19	Is the effective stripping arrangement (re-) certified during last dry dock?																			0	20	
	4400.7	Are cargo pipes regularly pressure tested?																			0	10	
	4400.12	Is washwater delivered to reception facilities prior to the vessel going to dry-dock?																			0	10	
																					0	150	
			Minimum ranking score required for element 4400 = 60																				

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	5000	PREVENTION OF POLLUTION																				
	5100	Biofouling Management																				
N	5100.5	Are there ship-specific procedures/instructions (according to IMO guidelines) for the control and management of ship's biofouling to minimize the transfer of invasive aquatic species?																			0	10
N	5100.6	Does the ship undergo in-water inspections and proactive hull cleanings as per the frequency and timing defined in consultation with coatings manufacturer and/or coatings consultant?																			0	5
N	5100.7	Does the ship communicate to the office data points that are pre-defined as indicators for reactive hull cleaning (For example, based on performance monitoring or other relevant datasets such as increased drag or increased friction)?																			0	5
N	5100.9	Is the vessel's hull coated with non-toxic hard coating to mitigate bio-fouling?																			0	10
				Total score																0	30	
				Minimum ranking score required for element 5100 = 5																		

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	5200	Waste Management / Garbage Handling Onboard						0					0						0					
		A. General procedures																						
	5200.31	Are all collection garbage receptacles for all categories of garbage labelled/marked and color coded?																				0	5	
	5200.9	Is there a designated space for long term stowage of garbage (except food waste)?																				0	10	
	5200.4	Is the vessel equipped with compactor to reduce the volume of garbage?																				0	5	
	5200.37	Is the vessel equipped with a waste shredder?																				0	5	
	5200.22	Are all recyclable material such as paper, plastic, metal (for example, tin cans) and dunnage always delivered to the port reception facilities?																				0	5	
		B. Garbage types																						
		B.1 Food waste																						
	5200.11	Is the vessel equipped with grinder/comminutor for food waste ?																				0	5	
	5200.32	Is the grinder / comminutor also used beyond 12 nautical miles (and operating outside special areas) from the nearest shore as they hasten assimilation into the marine environment ?																				0	10	
	5200.33	Is the discharge from comminutors directed to a dedicated holding tank while the vessel is operating in special areas?																				0	5	
	5200.34	Is the vessel equipped with a refrigerated sack compactor or freezer space for food waste storage?																				0	5	
	5200.35	Is the vessel equipped with a grease interceptors (grease traps)?																				0	5	
		B.3 Ashes and clinkers																						
	5200.25	Are all incinerated ashes and clinkers always delivered to the port reception facilities?																				0	10	
		B.4 Cleaning agents & additives																						
	5200.28	Are <u>non harmful</u> (MARPOL Annex V compliant) cleaning agents and additives used for cleaning the deck / external surfaces?																				0	10	
		B.5 Plastics																						
	5200.20	Are the crew aware that plastic should not be incinerated?																				0	10	
	5200.39	Are plastic cutlery, dishes & straws banned on board?																				0	5	
	5200.40	Are beverages and mineral water bottles in bonded store replaced by better sustainable alternatives such as beverages in tin cans and large water barrels in a dispenser?																				0	5	
	5200.41	Are single food servings in small plastic pots not used on board (for example, small yoghurt pots are replaced with decanted supplies in large containers)?																				0	5	
	5200.42	Is fine filtering mesh installed to the ship's washing machine's outlets to prevent micro-plastic fibres reaching the ocean?																				0	5	
	5200.43	Are old plastic ropes and mooring lines forbidden to be dumped at sea and be retained on board until landed ashore for correct disposal?																				0	5	
		C. Additional questions																						
	5200.16	Has the crew completed training / education programme in relation to garbage management?																				0	5	
						Total score																		
						Minimum ranking score required for element 5200 = 50																		
	5300	Vapour Emission Control Systems						0		0														
	5300.1	Is the vessel arranged with a cargo vapour collection and return and is the system approved by the classification society?																				0	20	
	5300.2	Is a vapour return connection fitted on fore- and aft sides of the manifold?																				0	10	
	5300.3	Are vapour connection lines arranged with drains and can they be blinded off from the IG line ?																				0	10	
	5300.5	Is the curved plate extending beyond vapour connection at fore- and aft side of manifold?																				0	10	
	5300.6	Is there documented instruction for operational use of the installed system(s)?																				0	10	
	5300.7	Is the crew familiarised with the system(s)?																				0	20	
						Minimum ranking score required for element 5300 = 0																		

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	5421	Ships required to carry out Fuel Change Over to low sulphur Marine Diesel Oil or low sulphur Marine Gas Oil (low sulphur Distillates)										0		0								
	5421.1	Has the company carried out a safety assessment with respective manufacturers, for any necessary modifications to the vessel's boilers & each fuel system onboard? (modifications should be class approved)																			0	20
	5421.2	Are updated fuel change over procedures (company-approved) available for the main engine, auxiliary engines & boilers? (procedures should be available for each fuel type used onboard)																			0	10
	5421.3	Are crew familiarised with updated fuel change over procedures?																			0	10
	5421.4	If modifications to fuel system are required, are updated detailed fuel system diagrams for fuel change over available?																			0	10
	5421.5	Is an additional inspection carried out according to documented instructions, to check for leakages during distillate fuel operation ?																			0	10
	5421.6	Is there an agreed procedure to manage related problem areas? (e.g. spares, maintenance due wear & tear)																			0	10
	5421.7	For cases where the vessel must use low sulphur fuel for a prolonged period Are there instructions from the engine manufacturer, for use of appropriate (cylinder) lube oil for main & auxiliary engines?																			0	5
				Total score																	0	75
				Minimum ranking score required for element 5421 = 55																		
	5430	Particulate Matter (PM) Emissions		0								0										
	5430.7	Does the ship have a Diesel Particulate Filter (DPF) for both main and auxiliary engines?																			0	10
	5430.8	Does the ship have a Diesel Oxidation Catalyst (DOC) for both main and auxiliary engines?																			0	10
	5430.9	Does the ship have an Electrostatic Precipitator (ESP) for both main and auxiliary engines?																			0	10
				Total score																	0	30
				Minimum ranking score required for element 5430 = 0																		

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	5440	Greenhouse Gas (GHG) Emissions - CO₂ Emissions																							
		A. Emission Monitoring																							
	5440.10	Does the ship use flow meters for monitoring and recording of fuel consumption? (Flow meter is to be calibrated and certified by for example a classification society)																				0	10		
	5440.11	<u>Applicable to ships contracted for building on or after 1st January 2013, or delivered on or after 1st July 2015:</u> Is the "attained EEDI" data for the ship available onboard?																				0	5		
		Attained EEDI of the ship =																							
	5440.14	Does the ship use a ship performance monitoring software to monitor and reduce energy consumption by operational measures on-board?																				0	5		
		B. Emission Reduction																							
		Short term goals (CO₂ reduction through energy efficiency measures)																							
	5440.15	(Design and operational based measures) Energy efficiency measures implemented on-board the vessel?																				0	20		
		For ease of use, measures are grouped according to the GLOMEEP Energy efficiency technologies information portal.				If YES, choose from below options and fill-in supplement CO₂ - GloMEEP tab																			
		Measures related to Machinery																							
		Measures related to Propulsion and Hull Improvements																							
		Measures related to Energy Consumers																							
		Measures related to Energy Recovery																							
		Measures related to Technical Solutions for optimizing the operations																							

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		Mid term goals (CO ₂ reduction through the use of low carbon fuels)												
5440.18	Main engines: Does the ship burn low carbon fuels such as:												0	15
	Low carbon fuels	If YES, choose from below options												
	LNG (Liquefied Natural Gas)													
	LPG (Liquefied Petroleum Gas)													
	GTL (Gas to liquid fuel)													
	Bio-diesel													
	Bio-LNG (Bio-methane)													
	Methanol													
	Ethanol													
	Dimethyl Ether													
	Other: *fill during survey*													
	If Other=													
5440.19	Auxiliary engines: Does the ship burn low carbon fuels such as:												0	15
	Low carbon fuels	If YES, choose from below options												
	LNG (Liquefied Natural Gas)													
	LPG (Liquefied Petroleum Gas)													
	GTL (Gas to liquid fuel)													
	Bio-diesel													
	Bio-LNG (Bio-methane)													
	Methanol													
	Ethanol													
	Dimethyl Ether													
	Other: *fill during survey*													
	If Other=													

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		Long term goals (CO₂ neutral operation through zero carbon fuels)																					
5440.20	Main engines: Does the ship use zero carbon fuels such as:																				0	25	
	Zero carbon fuels	If YES, choose from below options																					
	Anhydrous Ammonia																						
	Hydrogen																						
	Fuel Cells (Powered by ammonia or hydrogen)																						
	Batteries																						
	Nuclear																						
	Other: *fill during survey*																						
	If Other=																						
5440.21	Auxiliary engines: Does the ship use zero carbon fuels such as:																				0	25	
	Zero carbon fuels	If YES, choose from below options																					
	Anhydrous Ammonia																						
	Hydrogen																						
	Fuel Cells (Powered by ammonia or hydrogen)																						
	Batteries																						
	Nuclear																						
	Other: *fill during survey*																						
	If Other=																						
5440.22	Does the ship use renewable energy sources for energy production such as:																				0	25	
	Renewable Energy source	If YES, choose from below options																					
	Wind: *fill during survey*																						
	Solar																						
	Other: *fill during survey*																						
	Wind=																						
	If Other=																						
	C. Additional Questions																						
5440.23	Have shipboard personnel received training for energy efficiency measures and related monitoring systems on board?																				0	10	
					Total score																		
					0																		
					155																		
					Minimum ranking score required for element 5440 = 15																		

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5441	Greenhouse Gas (GHG) Emissions - Methane (CH ₄) Emissions - Main Propulsion																							
	B. Emission Reduction																							
	Alternative 1 - Gas Turbine or High Pressure Dual Fuel Engine																							
5441.2	Is the ship powered by low (or no) Methane Slip technology, for example, Gas Turbine or High Pressure Dual Fuel (HPDF) Engine?																					0	20	
	Alternative 2 - Other Engine Types																							
5441.3	Has the ship achieved annual reduction in Methane Slip on its LNG-fuelled engines?																					0	10	
	A. Emission Monitoring																							
5441.1	Does the ship use a continuous emission monitoring system (in-situ or extractive) for monitoring and recording Methane Slip?																					0	10	
	C. Additional questions																							
5441.4	Have shipboard personnel received awareness training on methane emissions from LNG-fuelled engines?																					0	5	
																						0	35	
5460	Environmental Ship Index (ESI)																							
5460.2	Does the ship participate in the Environmental Ship Index (ESI) and are ESI points above 30?																					0	20	
5460.3	Does the ship participate in the Environmental Ship Index (ESI) and are ESI points above 40?																					0	20	
5460.4	Does the ship participate in the Environmental Ship Index (ESI) and are ESI points above 50?																					0	20	
																						0	60	
5500	Sewage Management																							
	Sewage Treatment Plant																							
5500.1	Is the sewage treated with a sewage treatment plant which uses minimal or no harmful chemicals?																					0	10	
5500.2	Are samples of treated discharged effluent from the sewage treatment plant collected periodically (at least annually) for lab testing ashore to check the compliance with relevant MEPC standards?																					0	10	
5500.3	Is the ship in possession of the periodical sample testing report/certificate from a laboratory ashore confirming the compliance with the relevant MEPC standards?																					0	10	
5500.8	Is the sewage treatment plant regularly checked and maintained as per manufacturer's guidelines?																					0	5	
	For all ships: Sewage Holding Tank																							
5500.7	Is the sewage holding tank regularly checked and maintained?																					0	20	
																						0	55	

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	5510	Grey Water Management																					
	5510.1	Is the sewage treatment plant capable of treating grey water before being discharged?																	0	15			
	5510.2	Is the grey water never discharged within the coastal and port areas?																	0	10			
			Total score												0	25							
			Minimum ranking score required for element 5510 = 0																				
	5700	Ballast Water Management																					
		For ships required to follow D-1 standard (as per International Ballast Water Management Certificate (IBWMC))																					
RR	5700.5	Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled ?																	0	5			
	5700.6	Is the master aware of cases where the ship cannot reasonably be expected to carry out ballast water exchange?																	0	5			
N	5700.10	Does the ship voluntarily comply with D-2 ballast water management standard using a type-approved ballast water treatment system (BWTS)?																	0	10			
		For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC))																					
N	5700.11	Does the ship carry and implement ship-specific contingency plan prepared taking into account system design limitations, for example, - the UV-based BWTS cannot operate correctly in ports where the water is very muddy, - when operating in low salinity ports, the crew should plan to carry enough salt water or brine in order for the electrochlorination BWTS to function effectively.																	0	10			
N	5700.12	Does the ship undertake (both of) the following in order to keep the BWTS in operable condition: - maintain full inventory of manufacturer recommended spare parts list - maintain safe-margin stock of consumables (such as chemicals with short shelf-life, UV lamps, etc. as required by the installed system)																	0	5			
N	5700.13	Does relevant shipboard personnel make use of suitable personal protective equipment (PPE) for handling chemicals used to operate BWTS?																	0	10			
N	5700.14	Is relevant crew trained to operate specific BWT system installed on board, for example, by means of computer-based training, training at the makers facilities or on a simulation BWMS that mimics real BWTS operations?																	0	10			
N	5700.15	Is the relevant crew familiarized with the operation of the BWTS installed on board?																	0	10			
		For all ships																					
	5700.7	Are sediment volumes monitored & recorded ?																	0	10			
RR	5700.8	Does sediment disposal take place in port (to sediment reception facility) or at sea (more than 200nm from land and at depth greater than 200m) ?																	0	10			
			Total score												0	85							
			Minimum ranking score required for element 5700 = 50																				
	5800	Accidental Bunker Oil Pollution Prevention Measures (overflow prevention systems)																					
	5800.5	Are <u>all</u> fuel oil bunker tanks fitted with a high-high level alarm?																	0	15			
	5800.6	Are <u>all</u> fuel oil bunker tanks fitted with an overflow line that is connected to an overflow tank?																	0	5			
	5800.7	Are overflow lines of <u>all</u> fuel oil bunker tanks arranged with a flow alarm?																	0	5			
	5800.8	Are high level alarms and/or (over) flow alarms given on the location where the person in charge of the bunkering or transfer operation will normally be located?																	0	5			
			Total score												0	30							
			Minimum ranking score required for element 5800 = 5																				

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5801	Protection of fuel oil tanks, lube oil tanks and hull								0							
5801.1	Are any tanks intended for fuel-oil or other substances, with a minimum capacity of 20m³, constructed at least B/15 or 2 metres above the keel level ?													0	10	
5801.2	Are tanks for fuel oil protected by a double side ? (for ships below 20,000gt, width of double side to be at least 0.76m ; for 20,000gt and above, width to be at least 2 metres)													0	40	
5801.3	Are all lubrication oil tanks constructed at least 0.76 metres above the keel line ?													0	20	
5801.4	Is the ship's hull and/or fuel tanks are built of advanced shipbuilding plates (highly ductile steel) or structural features (for example, sandwich plate structure)?													0	30	
													0	100		
			Minimum ranking score required for element 5801 = 20													
	Lubrication and Use of Oils (Element nr.: 5810, 5811 & 5812)															
5810	Stern tube lubrication				0				0	0						
5810.1	Is the vessel fitted with a class approved stern tube <u>water</u> lubricated system which uses <u>sea water</u> as a lubricant? (system includes water conditioning and monitoring equipment)													0	60	
5810.6	Alternative for 5810.1, 5810.3, 5810.4 and 5810.5 Is the vessel fitted with a class approved stern tube water lubricated system which uses <u>fresh water</u> as a lubricant? (system includes water conditioning and monitoring equipment) *Additives used to maintain the condition of the water should be environmentally friendly.													0	50	
5810.3	Alternative for 5810.1 and 5810.6: Is the vessel fitted with a class approved stern tube lubrication system with an <u>air type</u> or <u>void space seal</u> ?													0	25	
5810.4	Alternative for 5810.1 and 5810.6: Does the vessel use a stern tube lubricant that is certified according to the EAL/EEL or equivalent?													0	15	
5810.5	Alternative for 5810.1 and 5810.6: Is the crew aware of characteristics of the environmentally friendly stern tube lubricant (EAL/EEL certified or equivalent) with respect to maintenance & its effect on the system if needed? (e.g. condition of seals & filters, temperature & condition of oil etc.)													0	5	
			Total score													
														0	60	
			Minimum ranking score required for element 5810 = 15													
5811	Mooring wire lubrication								0	0						
5811.1	Does the vessel use a mooring wire lubricant / grease that is certified according to the EEL?													0	20	
			Total score													
														0	20	
			Minimum ranking score required for element 5811 = 0													
5812	Deck equipment lubrication (use of oils)								0	0						
5812.1	Does the vessel use grease that is certified according to the EEL (all deck equipment)?													0	15	
5812.2	Does the vessel use gear oil that is certified according to the EEL (all deck equipment)?													0	10	
5812.3	Does the vessel use hydraulic oil that is certified according to the EEL in mooring and anchor appliances?													0	10	
5812.4	Does the vessel use hydraulic oil that is certified according to the EEL in crane appliances?													0	10	
5812.6	Is the crew aware of characteristics of environmentally friendly lubricants (EEL certified) with respect to maintenance & their effect on the applicable system if needed? (e.g. condition of seals & filters, temperature & condition of oil, prevention of humidity ingress etc.)													0	10	
			Total score													
														0	55	
			Minimum ranking score required for element 5812 = 0													

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																									
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5820	Management of bilge water and sludge handling onboard																								
5820.3	Are engine room personnel familiarized with on board sludge and bilge water management procedures?																					0	10		
5820.4	Are engine room personnel familiar with the system layout, drawings and manuals?																					0	5		
			Total score																			0	15		
			Minimum ranking score required for element 5820 = 15																						
5821	Outfitting of bilge water system																								
	A. Clean Drains (Drains that are normally not contaminated by oil)																								
5821.1	Does the bilge water from the Clean drain tank (for the collection of "clean drains" As per MEPC.1/Circ.642) pass through 15 ppm oil content meter and alarm?																					0	5		
5821.17	Does the engine room logbook logs discharges from the Clean drain tank (tank used for the collection of "clean drains", as per MEPC.1/Circ.642)?																					0	5		
	B. Soot Collection Tank arrangement																								
5821.10	Is washwater from the economizer/boilers collected in a Soot separation / collection tank?																					0	5		
5821.18	Is soot separation / collection tank decanted, remaining water transferred to bilge holding tank and solid soot particles collected for garbage disposal (reception facility)?																					0	10		
5821.11	Is an independent pump arrangement available for the discharge from the Soot separation / collection tank to overboard?																					0	5		
5821.2	Are management instructions regarding disposal of soot and soot-water mixtures available onboard?																					0	5		
	C. Oily bilge water tank arrangement																								
5821.12	Is all Oily bilge water from the bilge wells/drains transferred to the Bilge Primary Tank or pre-separation system for pre-separation of oil and water?																					0	5		
5821.5	Is Oily bilge water from the Oily bilge water holding tank pumped through the Oily Water Separator to the Clean water tank (rather than overboard discharge)?																					0	5		
	D. Oily water separator / Oil content meter																								
5821.6	N/A for vessels keel laid after 2005 Is the oil content meter with an automatic stopping device capable of measuring the difference between emulsifying particles and oil installed , as per IMO resolution MEPC.107(49)?																					0	5		
5821.7	Is there an equipment or a protection system (e.g. White Box) installed that stops the Oily Water Separator from discharging overboard when the Oil Content Meter is flushed/diluted with clean water to prevent illegal discharges of bilge water from machinery spaces?																					0	10		
5821.15	Is the authority for operating and maintaining the Oily Water Separator and Oil Content Meter with the master or this is automatically logged in the system?																					0	5		
5821.16	Alternative to 5821.15 Is the ship equipped with a system which would ensure that operation and maintenance of the Oily Water Separator and Oil Content Meter can only be started with the Master's permission (for example, Main/Master Switch on bridge)?																					0	5		
5821.8	N/A for vessels keel laid after 2005 Is the Oily Water Separator equipped with a re-circulating facility for testing the device with the closed overboard discharge (As per IMO resolution MEPC.107(49) 6.1.1.) ?																					0	5		
	5821.9 is an alternative to 5821.1 - 5821.18 (all the above)																								
5821.9	Is all the bilge water from machinery spaces always delivered to reception facilities?																					0	70		
			Total score																			0	70		
			Minimum ranking score required for element 5821 = 20																						

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5822	Outfitting of sludge handling system																							
5822.1	Is a sludge collecting pump installed (with the sole purpose of collecting the sludge from different ER tanks to the Oil Residue (Sludge) Tank)?																					0	5	
5822.2	Is a sludge discharge pump installed with the purpose of discharging the sludge to reception facilities (with sufficient capacity to discharge the sludge within 8 hrs)																					0	5	
5822.8	Is a tank or system installed with the sole purpose of removing large quantities of water from the sludge?																					0	5	
5822.9	Is a separate tank or system installed with the sole purpose of evaporating water from the sludge?																					0	5	
5822.10	Is a separate tank or system installed with the purpose of mixing the sludge while incinerated (in incinerator or boiler)																					0	5	
5822.6	Alternative to 5822.8 - 5822.10 Is all the ship sludge always delivered to reception facilities?																					0	20	
																						0	30	
5900	Ship Recycling - Inventory of Hazardous Materials																							
5900.10	Does the vessel have an "Inventory of Hazardous Materials" (Part I completed)?																					0	110	
5900.13	Alternative to 5900.10: Has the process been started to prepare Part I of the "Inventory of Hazardous Materials" with a target completion date?																					0	40	
																						0	110	

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																									
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6000	MAINTENANCE / SURVEYS																								
6100	Programme of Inspections																								
6100.1	Does the ship have an internal technical inspection program?																								
6100.2	Are relevant previous survey and internal technical inspection reports available on board?																								
6100.3	Does the ship have records of past ship repairs available onboard (from the current ship manager)?																								
6100.4	Does the company issue procedures/instructions for hull / ship's construction condition inspections to be carried out by the ship's personnel?																								
																								0	10
																								0	10
																								0	10
																								0	20
																								0	50
6110	Critical and Stand-by Equipment																								
6110.5	Is a Computer Based Program installed to register failures, break downs and near misses in order to have a constant event report on the systems?																								
6110.7	Is a Computer Based Program installed for spare parts management of critical equipment and stand- by equipment?																								
6110.8	Is a safety stock available for critical equipment and stand-by equipment?																								
																								0	10
																								0	10
																								0	10
																								0	30
6200	Mooring Equipment																								
6200.1	Are winch brake tests carried out and recorded at least once a year or after an excessive load?																								
6200.2	Is a winch brake test kit on board?																								
6200.3	Is an overview available with all details of mooring wires / fibre ropes, winches, inspections, maintenance, tests etc.?																								
6200.4	Is the ship provided with information on the design of the mooring system? (with examples to show the loads likely to be experienced under particular conditions and to illustrate those situations under which the limit of the system is likely to be reached)																								
6200.5	Are inspection, maintenance and discard criteria for mooring wires and tails / fibre ropes established and carried out by a competent person? (time interval for inspection should be in the PMS)																								
6200.8	Do these criteria take manufacturer's recommendations into account ?																								
6200.9	Does an additional examination take place after unusual events, such as long periods of inactivity, excessive loads, heat exposure, loading/discharge at swell ports, etc?																								
6200.10	Are internal inspections for wires + fibre ropes carried out & do these inspections take manufacturer's recommendations into account?																								
6200.11	Are the lubricants & cleaning products compatible with the wire and approved by the wire manufacturer?																								
6200.6	Is a log for "workingdays" of mooring wires and tails / fibre ropes maintained? (to predict the point of discard & for evaluation of wire/rope performance)																								
6200.7	Is an automatic wire rope lubricator in use on board?																								
6200.12	Alternative for 6200.7: (for fibre ropes) Are there procedures for care of fibre ropes?																								
																								0	10
																								0	95

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																								
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6300	Corrosion Prevention of Seawater Ballast Tanks						0						0											
6300.1	Are ballast tanks of double-hulled vessel, coated with a hard coating of a light colour?																					0	20	
6300.6	Alternative to 6300.1 Are ballast tanks coated with dark epoxy maintained with a modified epoxy coating of a light colour, after safety benefit assessment is carried out?																					0	10	
6300.7	Is the coating approved according to the IMO performance standard? (type approval or statement of compliance according to Res. MSC 215(82) in Coating Technical File)																					0	20	
6300.2	Are ballast tanks maintained in a good condition?																					0	20	
6300.3	Are manufacturer's technical product data sheets and job specifications of the coatings on board?																					0	5	
6300.5	Is the corrosion prevention system, other than coating, included in the maintenance system?																					0	5	
					Total score																0	70		
					Minimum ranking score required for element 6300 = 40																			
6400	Condition Assessment Program, Maintenance Additional Green Award requirements				0		0						0											
6400.1	Does the ship hold a CAP rating for <u>Hull</u> with Rating / Grade 2 as a minimum? (When the vessel reaches <u>15 years</u> of age, or by the <u>end of the 3rd special survey</u> , whichever is earlier.)																					0	25	
6400.8	Does the ship hold a CAP rating for <u>Cargo Systems</u> with Rating / Grade 2 as a minimum? (When the vessel reaches <u>15 years</u> of age, or by the end of the <u>3rd special survey</u> , whichever is earlier.)																					0	20	
6400.9	Does the ship hold a CAP rating for <u>Machinery</u> with Rating / Grade 2 as a minimum? (When the vessel reaches <u>15 years</u> of age, or by the <u>end of the 3rd special survey</u> , whichever is earlier.)																					0	20	
6400.2	(Alternative to 6400.1, 6400.8 and 6400.9 above) Is the ship less than 15 years of age or has not reached the end of the 3rd special survey yet?																					0	25	
6400.3	Is it company policy that maintenance meetings are carried out on board? (e.g. each month and at (all) sections on board)																					0	10	
6400.4	Is a maintenance checklist used regarding the (monthly) maintenance inspection?																					0	10	
6400.5	Is an evaluation report of vessel's performance sent to the company?																					0	20	
6400.6	Is an annual technical report made by the Company's superintendent?																					0	15	
					Total score																0	120		
					Minimum ranking score required for element 6400 = 60																			
6500	Certificates for Cargo Gear				0		0						0											
6500.1	Is a register of cargo handling gear and lifting appliances issued? (CG1)																					0	10	
6500.2	Is a certificate of test and thorough examination of lifting appliances issued? (CG2)																					0	10	
6500.3	Is a certificate of test and thorough examination of loose gear issued? (CG3)																					0	10	
6500.4	Is a certificate of test and thorough examination of wire rope issued? (CG4)																					0	10	
					Total score																0	40		
					Minimum ranking score required for element 6500 = 40																			

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - CHEMICAL TANKER - VERSION 2022																										
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	7000	CREW																								
	7200	Extra Personnel, Additional Green Award Requirement	0											0											0	10
	7200.1	Are there extra deck officers onboard in addition to what is required by minimum safe manning document?																							0	10
	7200.7	Are there extra engine officers onboard in addition to what is required by minimum safe manning document?																							0	10
	7200.2	Are there extra deck ratings onboard in addition to what is required by minimum safe manning document?																							0	10
	7200.8	Are there extra engine ratings onboard in addition to what is required by minimum safe manning document?																							0	10
	7200.3	Is there a ship administrator onboard (In addition to the standard complement and extra deck-officers and -ratings above) ?																							0	10
	7200.6	Is there an electrical officer onboard in addition to the engine officers required by the safe manning document?																							0	10
			Total score																							
																								0	60	
			Minimum ranking score required for element 7200 = 20																							
	7300	Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses	0																							
	7300.1	Has the 2nd officer (deck) completed an approved advanced training for chemical tanker cargo operations? (As a minimum, the program should comply with STCW 2010 including Manila amendments Reg V/1-1)																							0	20
	7300.2	Are all onboard personnel trained and qualified according to the approved basic training for chemical tanker cargo operations? (as STCW 2010 including Manila amendments Reg V/1-1) (If training comprises at least 3 months approved seagoing service on tankers (instead of an approved tanker familiarisation course) this should include onboard computer-based training (CBT) and a documented system showing participation and qualifications.)																							0	10
	7300.4	Have the lower ranking deck officers completed advanced fire fighting (IMO2.03) ?																							0	5
	7300.18	Have the lower ranking engine officers completed advanced fire fighting (IMO2.03) ?																							0	5
	7300.5	Has the onboard management completed the onboard assessment/train the trainer course (IMO 1.30)?																							0	5
	7300.6	Have the officers involved in cargo and ballast handling completed a simulator based training/course (IMO 1.37) ?																							0	10
	7300.7	Have the ship personnel completed "Marine Environmental Awareness" course (IMO 1.38)?																							0	5
	7300.8	Have all the deck officers completed bridge team management/bridge resource management training course (IMO 1.22) ?																							0	5
	7300.19	Have all the engine officers completed engine room resource management training course?																							0	5
	7300.20	Alternative to 7300.8 & 7300.19 Have all the officers completed maritime resource management course ?																							0	10
	7300.10	Is there a cadet currently onboard or has there been any in the last 6 months ?																							0	10
	7300.16	Are masters required to attend a fire training that specifically addresses chemical fires?																							0	15
	7300.17	Have all the officers completed Security Awareness Training?																							0	5
																								0	100	
			Minimum ranking score required for element 7300 = 50																							

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	7400	Familiarisation, Additional Green Award Requirement			0	0	0	0	0	0	0	0			
	7400.1	Have all the ship board crew after a period of absence or leave has been provided with familiarization of changes with regard to the operations/machinery which is related to their position ?												0	20
	7400.2	Have all newly employed/engaged shipboard crew (first ship for that specific company) been provided with familiarization with regard to operations/machinery which is related to their position ?												0	20
	7400.10	In those cases when junior or senior officers are transferred to another class of ship that differ considerably from where their experience lie, is an onboard appropriate operational experience with previous off-signing officers implemented for a specific minimum period?												0	10
	7400.4	Are the company format handover reports from all off - signing officers available onboard?												0	10
	7400.7	Are the on-signers aware of the content of the hand-over reports?												0	10
														0	70
					Minimum ranking score required for element 7400 = 50										
	7500	Safe Manning and Fatigue Management			0										
		A. General - managing work/rest hours													
	7500.1	Are work/rest hours performed by the individual seafarer recorded with the use of a software programme and the reports generated accessible for the office?												0	5
	7500.2	Is the master provided with instruction/procedure to monitor and address non compliance on STCW 2010 Manila amendments on work/rest hours onboard ?												0	10
		B. Fatigue management													
RR	7500.5	Does the ship have fatigue mitigation and control strategy (or similar document) available within the Safety Management System (SMS) to ensure the health and well being of the seafarers?												0	30
RR	7500.9	Does the fatigue mitigation and control strategy consist of the following (both): - framework to assess the hazards associated with fatigue (hazard assessment) - strategies to mitigate the risk of fatigue (risk mitigation)												0	15
RR	7500.10	Does the Master implement the use of any one of the following fatigue management tools (as described in IMO MSC.1/Circ1598) by shipboard crew on board: - Sleep Diary - Self-monitoring through fatigue and sleepiness ratings - Fatigue self-assessment tool - Fatigue event reporting												0	15
		C. Additional questions - reporting, training & awareness													
	7500.7	Does the ship have a procedure in which crew members are able to report to a designated person on fatigue related issues without fearing any action against them for such communication ?												0	5
	7500.11	Do all shipboard crew members undergo company fatigue management training and awareness campaigns on an initial and recurrent basis?												0	5
					Total score										
					0										
					Minimum ranking score required for element 7500 = 60										

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	9000	REQUIREMENTS ACCORDING TO ISO STANDARDS																					
	9421	ISO Certification																					
	9421.1	Is the ship certified for the latest edition of ISO 9001 (quality management systems)?																				0	10
	9421.2	Is the ship certified for the latest edition of ISO 10015 (quality management – guidelines for competence management and people development)?																				0	10
	9421.3	Is the ship certified for the latest edition of ISO 14001 (environmental management systems)?																				0	10
	9421.4	Is the ship certified for the latest edition of ISO 22301 (societal security – business continuity management systems)?																				0	10
	9421.5	Is the ship certified for the latest edition of ISO 27001 (information security management systems)?																				0	10
	9421.6	Is the ship certified for the latest edition of ISO 30401 (knowledge management systems – requirements)?																				0	10
	9421.7	Is the ship certified for the latest edition of ISO 45001 (occupational health and safety management systems)?																				0	10
	9421.8	Is the ship certified for the latest edition of ISO 50001 (energy management systems)?																				0	10
												Total score										0	80
		Minimum ranking score required for element 9421 = 0																					

CHECKLIST - RANKING CRITERIA - SURVEY - CHEMICAL TANKER - VERSION 2022						
Norm item		TOTAL SCORE REVIEW SHIP SURVEY - CHEMICAL TANKER	SHIP'S RANKING SCORE	MAXIMUM OBTAINABLE RANKING SCORE	MINIMUM RANKING SCORE REQUIRED	ELEMENTS WITH NO MINIMUM SCORE
1000	GENERAL					
1200	Enclosed Space Entry & Hot Work		0	80	80	
1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement		0	20	10	
1400	Control of drugs & alcohol onboard		0	45	30	
1500	Emergency Response System		0	30	15	
1510	Emergency Oil Recovery		0	10	0	
1600	Computer Systems, Networks, Data Security and Training. GA requirement		0	60	30	
1610	Cyber Risk Management		0	35	15	
1700	Noise and Vibration Management		0	50	15	
1710	Underwater Noise and Vibration Management		0	10	0	
1800	Social Dimension / Sustainability		0	50	10	
2000	NAVIGATION / BRIDGE OPERATIONS					
2100	Navigation		0	120	40	
2111	Electronic chart display & information systems / ECDIS		0	55	30	
2120	Fuel Change Over / Ballast Water Exchange		0	30	30	
2200	Helicopter / Ship Operations		0	20	20	
2300	Mooring Operations		0	50	30	
3000	MACHINERY / ENGINE OPERATIONS					
3100	Bunker Operations		0	50	50	
3200	Fuel oil management		0	80	40	
4000	CARGOES / CARGO OPERATIONS					
4100	Chemical Tanker Cargo Operations & Additional Green Award requirements		0	140	130	
4200	Ship to Ship Transfer Operations		0	30	30	
4300	Tank Cleaning Operations		0	30	30	
4400	Additional Green Award Requirements (tank alarms, coatings, etc.)		0	150	60	
5000	PREVENTION OF POLLUTION					
5100	Biofouling Management		0	30	5	
5200	Waste Management / Garbage Handling Onboard		0	120	50	
5300	Vapour Emission Control Systems		0	80	0	
5410	NOx Emissions		0	140	35	
5420	SOx Emissions		0	105	15	
5421	Ships required to carry out Fuel Change Over to low sulphur Marine Diesel Oil or low sulphur Marine Gas Oil (low sulphur Distillates)		0	75	55	
5430	Particulate Matter (PM) Emissions		0	30	0	
5440	Greenhouse Gas (GHG) Emissions - CO2 Emissions		0	155	15	
5441	Greenhouse Gas (GHG) Emissions - Methane (CH4) Emissions - Main Propulsion		0	35	0	
5460	Environmental Ship Index (ESI)		0	60	0	
5500	Sewage Management		0	55	20	

CHECKLIST - RANKING CRITERIA - SURVEY - CHEMICAL TANKER - VERSION 2022						
Norm item		TOTAL SCORE REVIEW SHIP SURVEY - CHEMICAL TANKER	SHIP'S RANKING SCORE	MAXIMUM OBTAINABLE RANKING SCORE	MINIMUM RANKING SCORE REQUIRED	ELEMENTS WITH NO MINIMUM SCORE
5510		Grey Water Management	0	25	0	
5700		Ballast Water Management	0	85	50	
5800		Accidental Bunker Oil Pollution Prevention Measures (overflow prevention systems)	0	30	5	
5801		Protection of fuel oil tanks, lube oil tanks and hull	0	100	20	
5810		Stern tube lubrication	0	60	15	
5811		Mooring wire lubrication	0	20	0	
5812		Deck equipment lubrication (use of oils)	0	55	0	
5820		Management of bilge water and sludge handling onboard	0	15	15	
5821		Outfitting of bilge water system	0	70	20	
5822		Outfitting of sludge handling system	0	30	10	
5900		Ship Recycling - Inventory of Hazardous Materials	0	110	40	
6000		MAINTENANCE / SURVEYS				
6100		Programme of Inspections	0	50	50	
6110		Critical and Stand-by Equipment	0	30	10	
6200		Mooring Equipment	0	95	65	
6300		Corrosion Prevention of Seawater Ballast Tanks	0	70	40	
6400		Condition Assessment Program, Maintenance Additional Green Award requirements	0	120	60	
6500		Certificates for Cargo Gear	0	40	40	
7000		CREW				
7200		Extra Personnel, Additional Green Award Requirement	0	60	20	
7300		Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses	0	100	50	
7400		Familiarisation, Additional Green Award Requirement	0	70	50	
7500		Safe Manning and Fatigue Management	0	85	60	
9000		REQUIREMENTS ACCORDING TO ISO STANDARDS				
9421		ISO Certification	0	80	0	
		TOTAL SCORES	0	3430	1510	

LEGEND

0	Indicates which crew/employee may be interviewed/questioned.
	Shows that a certain item is complied.
	Shows that a certain item is <i>not</i> complied.
0	Indicates that an alternative is used, hence the score for that item is a "0".
	The checklist was filled in incorrectly, thus shows "error".
0	Indicates that the whole element did not reach the minimum score, hence a finding is issued. The number shows the scores obtained.
	Shows which elements are minimum = maximum. Hence scores on all items is required to fully comply.
	Indicates that the minimum score for the relevant element is "0", hence a finding will <i>not</i> be issued.

* for detailed interpretations of the colours and the usage of the checklist, please refer to the pdf-file named "Instruction Notes" located on www.greenaward.org under "Certification/ Download".

GA Code:

Ship name:

Date of Ship Survey:

SUPPLEMENT TO 5410 - NOx EMISSIONS

DATA FROM "SUPPLEMENT TO ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE -- RECORD OF CONSTRUCTION, TECHNICAL FILE, AND MEANS OF VERIFICATION"

Keel Laid (DD/MM/YYYY) (available on supplement to IAPP certificate)	
Vessel assigned to NOx Tier-3 ECA route (Y/N)	
Main propulsion type	DIESEL ENGINE
Electricity generation	DIESEL ENGINE
TIER	NA
Questions applicable (from 5410.11 - 5410.18)	NA

For DIESEL-ELECTRIC & DUAL FUEL (LNG / LPG) data, use "OTHER ENGINE" modules below

MAIN ENGINE 1	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

MAIN ENGINE 2	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

AUXILIARY ENGINE 1	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

AUXILIARY ENGINE 2	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

AUXILIARY ENGINE 3	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

AUXILIARY ENGINE 4	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

GA Code:

Ship name:

Date of Ship Survey:

SUPPLEMENT TO 5410 - NOx EMISSIONS

DATA FROM "SUPPLEMENT TO ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE -- RECORD OF CONSTRUCTION, TECHNICAL FILE, AND MEANS OF VERIFICATION"

Keel Laid (DD/MM/YYYY) (available on supplement to IAPP certificate)	
Vessel assigned to NOx Tier-3 ECA route (Y/N)	
Main propulsion type	DIESEL ENGINE
Electricity generation	DIESEL ENGINE
TIER	NA
Questions applicable (from 5410.11 - 5410.18)	NA

For DIESEL-ELECTRIC & DUAL FUEL (LNG / LPG) data, use "OTHER ENGINE" modules below

OTHER ENGINE	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

OTHER ENGINE	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

OTHER ENGINE	NA→		RPM	
		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)				
Percentage reduction		NA	NA	NA
GA Compliance				

ENERGY EFFICIENCY TECHNOLOGIES INFORMATION PORTAL

TECHNOLOGY GROUPS

[IMO GLOMEEP Website](#)

GA Code:

Ship name:

Date of Ship Survey:

MACHINERY TECHNOLOGIES

This technology group includes measures that improve the energy efficiency of main and auxiliary engines. These include measures such as auxiliary systems optimization, optimizing heat exchangers, waste heat recovery systems, electronic auto-tuning, batteries and other solutions.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Auxiliary systems optimization	Optimizing auxiliary systems to actual operational profiles, not design conditions	Semi-mature	All vessels
	Engine de-rating	De-rating an engine for reduction of the vessel's maximum speed to increase its efficiency by limiting the potential power output	Semi-mature	Vessels sailing 10-15% slower than design speed
	Engine performance optimization (automatic)	Automatic increase of engine efficiency through testing and tuning according to actual operational load and conditions	Semi-mature	Mainly for two stroke engines
	Engine performance optimization (manual)	Manual increase of engine efficiency through testing and tuning according to actual operational load and conditions	Mature	All vessels
	Exhaust gas boilers on auxiliary engines	Exhaust gas boilers recover the heat from the exhaust gas of auxiliary engines to generate steam, hot water or heat for process heating	Semi-mature	Vessels without shaft generator
	Hybridization (plug-in or conventional)	Use of electricity to replace various modes of power consumption	Semi-mature	Vessels with large fluctuations in power output (ferries, offshore vessels, tugs)
	Improved auxiliary engine load	Increase of the auxiliary engines' load and efficiency by reducing the number of auxiliary engines running	Semi-mature	All vessels
	Shaft generator	Produce electricity from the main propulsion engine	Mature	All vessels with high power needs and long transits
	Shore power	Use of cold ironing in ports to reduce fuel consumption on power producing engines	Semi-mature	For smaller vessels and in ports with developed solutions for larger vessels
	Steam plant operation improvement	Improve operations and maintenance of steam plant system saving fuel on oil fired boiler	Mature	Mainly crude and product tankers
	Waste heat recovery systems	Recover thermal energy from the exhaust gas and convert it into electrical energy	Semi-mature	All vessels with engines above 10 MW

PROPULSION AND HULL IMPROVEMENTS

Technologies in this group focus on improving the hydrodynamic performance of the vessel. This includes solutions that reduce the resistance of the vessel and/or also improve the propulsive efficiency of the vessel. Examples include measures such as propeller polishing, hull cleaning, PIDs (Propulsion Improving Devices), air lubrication and more.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Air cavity lubrication	Use of air injection on the wetted hull surfaces to improve a ship's hydrodynamic performance	Semi-mature	Most vessels in deep sea trade
	Hull cleaning	Removal of fouling on the hull to increase the vessel's hydrodynamic performance	Mature	All vessels
	Hull coating	Reduction of the hull's resistance through water	Mature	All vessels
	Hull form optimization	Optimizing the hull for lower resistance through water	Mature	All vessels
	Hull retrofitting	Retrofitting of the bulbous bow, optimizing thruster tunnels or bilge keel to reduce resistance	Mature	All vessels
	Propeller polishing	Removal of fouling on the propeller	Mature	All vessels
	Propeller retrofitting	Retrofitting the propeller to increase efficiency	Semi-mature	All vessels
	Propulsion Improving Devices (PIDs)	Installation of propulsion improving devices	Mature	All vessels

ENERGY CONSUMERS

Consumers are equipment or devices that use energy when operated. Technologies in this group focus on minimizing the energy consumption by improving the device or optimizing the utilization of the device. Examples of measures in this group are frequency controllers, cargo handling systems, low energy lighting and more.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Cargo handling systems (Cargo discharge operation)	Reduction of energy consumption while discharging crude oil by use of model-based studies of the discharge operation	Semi-mature	Tankers
	Energy efficient lighting system	Use of energy efficient lighting equipment, such as LED light, to increase efficiency and remove heat loss from light devices	Mature	All vessels
	Frequency controlled electric motors	Regulating the frequency of the motors in order to adapt the motor optimized load	Mature	All vessels

ENERGY RECOVERY

Technologies in this group focus on capturing energy from the surroundings of the vessel and using or transforming this to useful energy for the vessel. This involves measures such as application of kites, fixed sails or wings, Flettner rotors, or solar panels.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Fixed sails or wings	Use sails or wings to replace some of the propulsion power needed	Not mature	Vessels with enough place on deck (general cargo, tankers, bulkers)
	Flettner rotors	Use Flettner rotors to generate power from wind energy	Not mature	Dependent on trading area and sufficient free deck-surface
	Kite	Use a kite to replace some of the propulsion power needed	Not mature	All vessels
	Solar panels	Install solar panels for conversion of solar energy to electricity	Not mature	Dependent on trading area and sufficient free deck-surface

TECHNICAL SOLUTIONS FOR OPTIMIZING OPERATION

Technologies in this group focus on improving the operation of the vessel more than improving the vessel itself. The list of suggested measures includes both technologies and suggestions for best practice (without direct application of a technology). Measures in this group include trim and draft optimization, speed management, autopilot adjustment and use, combinator optimizing, and others.

Y?	NAME	FUNCTION	TECHNICAL MATURITY*	APPLICABILITY
	Autopilot adjustment and use	Use of an automatic system to control the vessel's rudder in a more energy efficient manner	Mature	All vessels
	Combinator optimizing	Use of optimized pitch settings and propeller speed for optimized efficiency of propulsion system	Mature	For vessels with controllable pitch propeller
	Efficient DP Operation	Optimize the operation in DP mode	Semi-mature	Vessels with DP mode
	Speed management	Management of the vessel's speed in the most efficient manner	Semi-mature	All vessels
	Trim and draft optimization	Optimizing the trim and draft to reduce the vessel's water resistance	Semi-mature	All vessels
	Weather routing	Including weather conditions when planning a voyage	Mature	All vessels

Definitions of maturity levels according to uptake across the maritime industry, and degree of proven technology/principle

Mature	Proven, new or existing technology/principle, with high uptake across the industry.
Semi-mature	Proven, new or existing technology/principle, but with limited uptake across the industry.
Not mature	New unproven-, unproven existing-, or proven existing technology/principle but with very few installations and little to no operational experience.

*This Information Portal is still under development and further images will be added.

This Energy Efficiency Technologies Information Portal was developed in cooperation with DNV GL.

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APPENDIX 5

CHECKLIST - VISUAL INSPECTION - SHIP SURVEY CHEMICAL TANKER

(CMC-10)

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8100 Machinery			
	8101 Reports			
	8101.1	Classification reports	Survey reports with recommendations and conditions of class, repairs	
	8101.2	State Authority reports	Survey reports, recommendations	
	8101.3	Company Reports	Inspection, repair, maintenance, planning, dry-dock reports by ship's staff and superintendents	
	8101.4	Inspection guidelines	Guidelines on the means of access to structures for inspection and maintenance of oil tankers	
	8101.5	Other reports	Vetting reports by chartering companies and independent surveyors	
	8102 Engine Room			
	8102.1	Overall tidyness of E.R. space	Unsecured and loose material, tools and E.R. spare-parts	
	8102.2	General cleanliness of E.R.	Oil- & gas-free enviroment	
	8102.3	Storage E.R. equipment	Equipment stored at designated places	
	8102.4	Handling of general E.R. waste	General waste stored & handled properly	
	8102.5	Indication of E.R. emergency escapes	Clearly visible and not obstructed	
	8102.6	Save-alls	Oil, liquid and dirt free	
	8102.7	Workshop	Safety instructions near machinery (Grindstone, Lathe etc)	
	8103 Main Propulsion			
	8103.1	Exhaust gas lines	Leakage / condition of lagging, black spots and stripes / loose lagging	
	8103.2	Fuel lines H.P. & L.P.	H.P. pipes condition of protecting pipe/cover, L.P. pipes check leakage and heating tracings	
	8103.3	Cleanliness of cylinder heads	Fuel oil, cooling water, lub. Oil and exhaust gas leaks	
	8103.4	Instructions on emergency stand	Are there clear instructions available for changing over from normal to emergency conditions	
	8103.5	Condition of controllers / thermo couples & wiring	Loose wires, open doors of controllers	
	8103.6	Fuel oil system	Filters for leakage, purifiers cleanliness, area around purifiers	
	8103.7	Lub. Oil system	Filters and safealls, purifiers condition	
	8103.8	Starting air system	Condition of starting air lines and valves	
	8103.9	Cooling water system	Condition of expansion bellows	
	8104 Auxiliary Engines			
	8104.1	General performance		
	8104.2	Leakage, condition of fuel oil, lub. oil lines	Cracks, corrosion and / or pipes connections not tight	
	8104.3		Oil-, water-, corrosion- and dirt-free	
	8104.4	Emergency Generator	Condition and date last tested	
	8105 Boilers			
	8105.1	Steam or Thermal oil		
	8105.2	Condition of burner front	Oil leakage, and air leakage	
	8105.3	Lagging / isolation of fuel and steam lines	Condition of lagging	
	8105.4	Thermal Oil	Check possible leakages bellows / quick closing valves	
	8105.5	Boiler bilge / Save-all	Oil-, water-, corrosion- and dirt-free	

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8100 Machinery			
	8106 Bilge System			
	8106.1	Cleanliness of bilges on every platform	Presence of oil, water, corrosion and / or dirt	
	8106.2	Bilge separator, position of all valves		
	8106.3	In port overboard valve sealed		
	8106.4	Condition and record regarding oily-bilge separator	Check Oil Record Book - Machinery Space Operations	
	8106.5	Bilge alarms	Alarms high level & high-high level in good condition	
	8106.6	Emergency Bilge Suction valve	Check condition / last time tested	
	8106.7	Double bottom sounding pipes	Check functioning self closing valves	
	8107 Piping Systems			
	8107.1	General condition	Check for leakage and / or temporary repairs	
	8107.2	Condition of piping supports	Check for corroded, broken and / or missing supports	
	8108 General Service Air Systems			
	8108.1	Condition of air and oil drains	Check good working	
	8108.2	Condition of pipe lines	Check for leakage and / or temporary repairs	
	8108.3	Condition of safety valves	Check free movement	
	8109 Chemicals			
	8109.1	Sufficient Personal Protecting Equipment available	Near storage place and users place	
	8109.2	Sufficient signboards available	Near storage place and users place	
	8109.3	Storage of chemicals according safety rules	According makers safety instructions	
	8110 Electrical			
	8110.1	Generator inspections during operation max. load		
	8110.2	Examination of cables without attachments	Cable supports bulkhead and deck penetrations	
	8110.3	Electrical equipments in acc. with danger zones	Zeners barriers etc.	
	8111 Inert Gas Plant			
	8111.1	Inert Gas system fully operational		
	8111.2	Condition of all instrumentation	Special O2 meter	
	8111.3	Condition of all alarms and trips	High and low level alarms etc.	
	8112 Sewage Plant			
	8112.1	Sewage Plant fully operational	Alarms, level switches etc.	
	8112.2	Position of valves correct	Check if the by-pass valves are closed	
	8113 Fire Pumps			
	8113.1	Position of firepump valves	Are instructions available for position of valves	
	8113.2	General check of emergency firepump	Position of Fuel valve, Content of fuel tank etc.	
	8114.3	Operating instructions of firepump and drive-unit	Clear instruction board available	
	8114 Emergency Electrical Stops			
	8114.1	Emergency stops of general service pumps	Last time tested	
	8114.2	Emergency stops of steering gear pumps	Last time tested	
	8114.3	Emergency stops of fans	Last time tested	

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8100 Machinery			
	8115 Quick Closing Valves			
	8115.1 Condition of closing valve station		Check for clear instructions	
	8115.2 Condition of closing valves E.R.		Check for obstructions or other objects	
	8116 Gauge Glasses Class			
	8116.1 Condition of gauge glasses closing valves		Check proper working and if they are normal closed	
	8116.2 Condition gauge glasses lub. oil tanks		Check proper working and if they are normal closed	
	8116.3 Condition gauge glasses chemical tanks		Check proper working and if they are normal closed	
	8116.4 Condition gauge glasses fuel tanks		Check proper working and if they are normal closed	
	8117 Ventilation			
	8117.1 Fire flaps in trunks engine room		Check markers open/close and proper working	
	8117.2 Fire flaps		Check proper working	
	8118 Exhaust gases of machinery			
	8118.1 Emission of main engines		Content NOX en SOX	
	8200 Steering Gear			
	8201 SOLAS requirements			
	8201.1 Steering gear unit complies with SOLAS			
	8201.2 Steering gear room complies with SOLAS			
	8202.3 Steering gear unit - and room cleanliness		Check for hydraulic leaks, presence of water and / or oil in drip-trays	
	8203 Change over procedures			
	8203.1 Emergency steering gear change over procedures		Signs posted with instructions for emergency change-over	
	8203.2 Procedures for emergency change-over visible		Clearly visible near controls of steering gear unit	
	8204 Testing			
	8204.1 Emergency-steering tested recently		Check records in engine / deck logbook	
	8204.2 Steering Gear		Check records in engine / deck logbook. Testing before arrival and departure.	
	8205 Charging emergency header tank			
	8205.1 Emergency header tank fully charged		Tankers over 10.000 Gt must have fixed tank with sufficient capacity to recharge min. One unit	
	8205.2 Fixed storage tank installed			
	8206 Compass			
	8206.1 Compass present in steering gear room			
	8206.2 Compass clearly visible from control-station			
	8207 Bridge Communications			
	8207.1 Satisfactory communications with bridge			
	8207.2 Telephone available and working			
	8207.3 Sound powered telephone available and working			

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8200 Steering Gear			
	8207 Visibility of Rudder Angle Indicator			
	8207.1	Rudder angle indicator present		
	8207.2	Rudder angle indicator visible at steering position		
	8208 Access to Steering Gear			
	8208.1	Entrance door to steering gear room closed	Door to be kept closed at all times and not lashed or blocked in open position	
	8208.2	Access to steering gear unit unobstructed	Steering gear room should be uncluttered with easy access to all components of the system	
	8208.3	Safety and protection measures fitted	Vessels > 10.000 GT should have railings around the steering gear and deck non-slip surface	
	8208.4	Bilge alarms	Alarms high level & high-high level in good condition	
	8300 Cargo / Ballast System			
	8301 Drawings / Diagrams in Cargo Control Room			
	8301.1	All relevant drawings and diagrams available	Pipe Line diagrams, mimic diagrams etc should be available in CCR	
	8301.2	Drawings visible inside CCR	Drawings clearly visible and understandable for operation	
	8302 Functioning of Cargo / Ballast Pumps			
	8302.1	Is every separate pump working		
	8302.2	Cargo pumps with temperature sensors readout CCR		
	8302.3	Stripping pumps with temperature sensors readout CCR		
	8302.4	Ballast pumps with temperature sensors readout CCR		
	8302.5	Cargo pumps fitted with temperature trips		
	8302.6	Cargo pumps with sensors for vibration monitoring bearings		
	8302.7	Is all equipment combined working	Malfunctioning often indicator	
	8303 Functioning Pump Controls/Turbine Controls			
	8303.1	Pump controls functioning	Speed sensor, suction meter, pressure meter, vibration meter	
	8303.2	Pump alarms functioning	Temp. of bearings and casing	
	8303.3	Turbine trips functioning	Overspeed, backpressure, lub.oil pressure and bearing temp.	
	8303.4	Regular tests conducted		
	8303.5	Tests recorded		
	8304 Gauges and Tachometers			
	8304.1	Cargo / Ballast pump gauges operational		
	8304.2	Cargo / Ballast pump tachometers operational		
	8305 Engine / Pump Room Seals			
	8306 Cargo Control Room Communications			
	8306.1	Communication satisfactory	Communication between Cargo Control Room / Pump Room / Cargo Pump Turbines (E.R. side)	
	8306.2	Communication operational		

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8300 Cargo / Ballast System			
	8307 Meters / Displays Inside Pump Room Class			
	8307.1 Suction and discharge pressure meters		Check for good working	
	8307.2 Continuous monitoring of hydrocarbon gases		Check test dates	
	8307.3 Thermometers of bearings / pump casing		Check for good working	
	8307.4 Bilge alarms		Check for high level and high-high level	
	8308 Electrical Equipment			
	8308.1 Equipment installed explosion-proof		Light, control equipment, switches etc.	
	8308.2 Ventilation and lighting interlocked		Ventilation starts when lights switched on, failure of ventilation separate of light-functioning	
	8308.3 Condition of electrical safety barriers			
	8309 Oil Discharge Monitoring Equipment			
	8309.1 Oil discharge monitor		Check operational condition / calibration	
	8309.2 Recorder		Check recent history output	
	8310 Vapour return system			
	8310.1 Cargo vapour return system		According IMO guidelines	
	8400 Structural			
	8401 Drawings			
	8401.1 Review of all relevant structural drawings		Overview structural design and scantlings	
	8402 Reports			
	8402.1 Classification reports		Survey reports with thickness readings, recommendations and conditions of class, repairs	
	8402.2 State Authority reports		Survey reports, recommendations	
	8402.3 Company Reports		Inspection reports, repair, maintenance and dry-dock reports by ship's staff and superintendents	
	8402.4 Inspection guidelines		Guidelines on the means of access to structures for inspection and maintenance of oil tankers	
	8402.5 Other reports		Vetting reports by chartering companies and independent surveyors	
	8403 External Hull			
	8403.1 Shell plating		Check for indents, cracks, corrosion, pitting, paint-condition, local rust and / or cargo stripes	
	8404 Cargo Tanks			
	8404.1 Structural integrity		Deformations, cracks, leakages of bulkheads, stringers, webs, girders	
	8404.2 Corrosion condition		Corrosion and / or corrosion pattern of structural design	
	8404.3 Corrosion protection system		Condition of coating and / or sacrificial anodes	
	8404.4 Pipelines and valves		Condition pipes, supports, coupling, flanges, deformations and leakages	
	8404.5 Miscellaneous equipment		Condition cargo pumps, cargo control, tank cleaning / tank heating systems, access facilities	
	8405 Ballast Tanks			
	8405.1 Structural integrity		Deformations, cracks, leakages of bulkheads, stringers, webs, girders	
	8405.2 Corrosion condition		Corrosion and / or corrosion pattern of structural design	
	8405.3 Corrosion protection system		Condition of coating and / or sacrificial anodes	
	8405.4 Pipelines and valves		Condition pipes, supports, coupling, flanges, deformations and leakages	
	8405.5 Miscellaneous equipment		Condition ballast pumps, ballast control, access facilities	

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8400 Structural			
	8406 Void spaces / Cofferdams			
	8406.1	Structural integrity	Deformations, cracks, leakages of bulkheads, stringers, webs, girders	
	8406.2	Corrosion condition	Corrosion and / or corrosion pattern of structural design	
	8406.3	Corrosion protection system	Condition of coating and / or sacrificial anodes	
	8406.4	Pipelines and valves	Condition pipes, supports, coupling, flanges, deformations and leakages	
	8404.5	Miscellaneous equipment	Condition emergency pumps / controls, access facilities	
	8407 Main Deck & Fittings			
	8407.1	Deck plating - Deformations	May indicate problems from underneath, stiffeners or underneath deck-plating	
	8407.2	Deck plating - Fractures	May indicate substantial corrosion and / or local stress areas	
	8407.3	Deck plating - Damages	Caused by collisions and / or under-/overpressure cargo tanks	
	8407.4	Deck plating - Corrosion	If substantial indicate pattern, density and locations	
	8407.5	Tank entrances and deck openings	Condition check of covers and closing devices	
	8407.6	Pipeline couplings, flanges, branches and supports	Condition check, deformation, cracks, corrosion, tightness	
	8407.7	Ventilation - pipes / ducts	Condition check of covers, closing devices, flame screens, floating locks	
	8407.8	Inert Gas valves, non return valves, P/V breaker, mast riser	Condition check	
	8407.9	P/V valves on every separate tank	Condition check and check double means for P/V	
	8407.10	Bunker connections fwd & aft at SB & PS cargo-manifold		
	8407.11	Emergency stop at cargo manifold	Condition check	
	8407.12	Permanent drip-trays on open deck where spills may occur		
	8407.13	Are these drip-trays clean and properly closed		
	8407.14	Distance presentation flanges - ship's side > 4,6 mtr		
	8407.15	Manifold spill-tank length extending beyond bunker connection		
	8407.16	Manifold spill-tank 1,8 mtr. in width and reaching 1,2 mtr beyond reducer presentation flanges		
	8407.17	Manifold spill-tank minimum depth of 300 mm		
	8407.18	Suitable means provided for draining manifold spill-tank		
	8407.19	Manifold spill-tank clean and empty		
	8407.20	Manifold spill-tank well maintained		
	8407.21	Continuous deckedge fishplate height / deck scupper closing devices		
	8407.22	Emergency pump fixed or portable		
	8407.23	Dropvalves from spill-tanks to sloptanks on deck		
	8407.24	Arrangements for continuous draining of rain water		
	8407.25	Hose handling, stores handling	Check certificates and working order	

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8400 Structural			
	8407.26	Sufficient tank-openings for portable COW to reach all shadow areas	In accordance with shadow diagram class	
	8407.27	Safe access to bow and main deck railing	Check condition and compliance new rules	
	8407.28	Adequate supports installed abeam of manifold for cargo-hoses	Fitting of cargo hose rail	
	8407.29	Bunker and oil tank derating pipes	Check flame screens and coamings	
	8409 Pump Room			
	8409.1	Structural integrity	Condition check, deformation, cracks, corrosion	
	8409.2	Sea-inlet boxes	Condition check	
	8409.3	Pipelines, valves, couplings, overboard connection	Check corrosion, working conditions and leakages	
	8409.4	Bilge level monitoring devices and bilge alarms installed		
	8409.5	Ventilation system	Condition fans, trunking and closing devices	
	8410 Accommodation & Machinery Spaces			
	8410.1	Structural integrity	General condition, damages & defects	
	8410.2	Doors, windows, ventilation ducts, closing devices	Condition check and water tightness	
	8410.3	Stairs and platforms	Condition check, corrosion / deformations	
	8410.4	Pipelines, valves, couplings, overboard connection	Condition check	
	8410.5	Safety equipment	Condition check CO2, Halon system, extinguishers, fire hoses, alarms etc.	
	8410.6	Certificates for safety equipment		
	8411 Mooring equipment			
	8411.1	Mooring lines	Condition mooring lines	
	8411.2	Winches	Foundation bolts firm, casing crack-, corrosion-free, no leakages and save-all	
	8411.3	Condition winch-brakes	Check last test report and thickness linings	
	8412 Anchoring equipment			
	8412.1	Anchor, anchor shackles and chain	Wear, corrosion, clearances inside hawser pipe	
	8412.2	Anchor winch and associated gear	Foundation, no leakages, condition of brakes, hinges and hinge plates	
	8412.3	Anchor securing	Condition and workable	
	8413 Emergency towing system			
	8413.1	Condition emergency towing equipment aft ship.	Check wires etc.	
	8413.2	Condition emergency towing equipment fore ship		

Green Award Visual Inspection - Chemical Tankers

Check Box	Norm item		Inspection Focus	Remarks
	8500 Safety / Rescue			
	8501 Safety equipment			
	8501.1	Certificates	Check certificates, reports and safety drills	
	8501.2	Safety plan	Check available and clearly visible	
	8502 Rescue equipment			
	8502.1	Life boat + davits	Check condition (incl. Kathodic wear) and working order	
	8502.2	Rescue boat + davits	Check condition (incl. Kathodic wear) and working order	
	8502.3	Life rafts + release system	Check condition (incl. Kathodic wear) and working order	
	8502.4	Accommodation ladders, pilot ladders and gangway	Check condition and working order	
	8502.6	Life jackets	Check condition and working order	
	8502.7	Life buoys	Check condition (incl. Kathodic wear) and working order	
	8503 Fire fighting			
	8503.1	CO2 / Halon system	Pressure gauges / indicators on bottles / pipelines / nozzles	
	8503.2	Foamtank	Content / Filling	
	8503.3	Foam monitors on deck	Check condition and working order	
	8503.4	Fire control plans	Check available and clearly visible	
	8503.5	Portable fire extinguishers	Check ready for use, last check date	
	8503.6	Fireman's outfit	Check ready for use, easy accessible	
	8503.7	Breathing Apparatus charging compressor	Check ready for use, easy accessible	
	8503.8	International Ship/Shore Fire connection	Check available both sides	
	8503.9	Fire alarm system and detectors	Check test records, condition in accommodation, ER and boiler room	
	8503.10	Fire flaps and vent stops	Check condition on deck, accommodation, ER and boiler room and clearly marked	
	8503.11	Fire lines	Check condition on deck, accommodation, ER and boiler room	
	8503.12	Fire hoses	Check condition on deck, accommodation, ER and boiler room	
	8503.13	Fire system for scavenging air receiver and boiler front	Check condition and working order separate fire fighting system	
	8504 Escape routes			
	8504.1	Free access	Check free access without obstructions	
	8504.2	Indicators	Check clear markers / positioning	
	8504.3	Emergency lighting	Check clear markers / positioning	
	8505 Oil / Cargo Spill Response Equipment			
	8505.1	Oil / Cargo Pollution Emergency Plan	Check availability	
	8505.2	Emergency equipment	Check content and working order	