Green Award Foundation

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Annex 3f: Green Award Requirements (<u>LPG carrier</u>) Version 2023

Checklists for Office Audits and Ship Surveys

Effective as of 1 March 2023



Annex 3f: Green Award Requirements LPG carrier)

LPG carriers



Table of contents

Appen- dix	Subject	Doc. Nr.	Effective date	Page number
1	Checklist Basic Criteria - <u>Office audit</u> - LPG carrier	PMC-06	01/03/2023	3
2	Checklist Ranking Criteria - Office audit - LPG carrier	PMC-07	01/03/2023	9
	Checklist Ranking Criteria - Office audit - Total Score Review		01/03/2023	41
3	Checklist Basic Criteria - Ship survey - LPG carrier	PMC-08	01/03/2023	46
4	Checklist Ranking Criteria - Ship survey - LPG carrier	PMC-09	01/03/2023	52
	Checklist Ranking Criteria - Ship survey - Total Score Review		01/03/2023	81
5	Checklist Visual Inspection - Ship survey - LPG carrier	PMC-10	01/03/2023	88

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.

 $^{^{\}star}$ for detailed interpretations of the colours and the usage of the checklist, please refer to the pdf-file named

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

CKL LPG / VERSION 2023 / 1.0 2 of 96

[&]quot;Instruction Notes" located on www.greenaward.org under "Certification/Download".

APPENDIX 1

CHECKLIST - BASIC CRITERIA - OFFICE AUDIT - LPG CARRIER

(PMC-06)

		CHECKLIST - BASIC CRITERIA - OFFICE AUG	DIT -	LP	G C	ARI	RIER	R- V	ERS	ION	202	3									
Revision Code	Norm item	BASIC Office - LPG	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.	п DEPT.	Doc. & Impl.	INS-/CLAIM DEPT.	NOT APPLICABLE
	100	MANAGEMENT ELEMENTS																			
	101	GENERAL			0		0		0		0		0	0				0		0	
	101.1	Are the Management System (MS) Manuals maintained and updated?																			
		SAFETY AND ENVIRONMENTAL PROTECTION POLICY			0		0		0		0		0	0							
		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?																			
		Is this policy maintained and implemented at all shore-based levels as well as all ship-based levels?																			
	103	COMPANY RESPONSIBILITIES AND AUTHORITY			0		0		0		0		0	0				0		0	
		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	0		0																
	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			0		0		0		0		0	0						0	
	105.1	Is the responsibility of the master clearly defined and documented?								T											
		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?																			

		CHECKLIST - BASIC CRITERIA - OFFICE AUD	DIT -	LP	G C	AR	RIEI	R- V	ERS	1018	1 20	23									
Revision Code	Norm item	BASIC Office - LPG	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.	IT DEPT.	Doc. & Impl.	INS-/CLAIM DEPT.	Doc. & Impl. NOT APPLICABLE
	100	MANAGEMENT ELEMENTS (continued)																			
	106	RESOURCES AND PERSONNEL AND STCW			0						0										
	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?																			\perp
	106.3	Has the level of competency been defined and documented for office personnel performing functions pertinent to safety and the environment?																			\bot
	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?																			\bot
	106.5	Do arrangements include training and an introduction to the quality system for the executive management?																			\perp
	106.6	Do office personnel receive training/courses with regard to the ISM Code and are they consistent with the MS manuals?																			\perp
	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?																			\perp
	106.13	Are operational instructions on board written in a language understood by officers and shipboard personnel?																			\perp
	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			0		0		0		0		0		0					0	
	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?																			
	108	EMERGENCY PREPAREDNESS	0		0		0		0		0		0		0			0)	0	
	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?																			

		CHECKLIST - BASIC CRITERIA - OFFICE AUG	DIT -	LP	G C	AR	RIE	R- V	ERS	101	202	3									
Revision Code	Norm item	BASIC Office - LPG	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	ІТ DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	NOT APPLICABLE
	100	MANAGEMENT ELEMENTS (continued)																			
	109	REPORTS AND ANALYSES OF NON-CONFORMATIES, ACCIDENTS AND HAZARDOUS OCCURENCES			0		0		0		0			0						0	
	109.1	Are safety and environmental inspections carried out, documented and reported?																			\Box
	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			0		0		0												
	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			0																
	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?							<u> </u>												Ш
	112	COMPANY VERIFICATION, REVIEW AND EVALUATION	0		0		0		0		0		o	0		0		0		0	
	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?																			

		CHECKLIST - BASIC CRITERIA - OFFICE AUD)IT -	LP	G C	AR	RIEI	R- V	ERS	ION	202	3									
Revision Code	Norm item	BASIC Office - LPG	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHARI DEPI. Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	т DEPT.	Doc. & Impl.	INS- / CLAIM DEPT. Doc. & Impl.	NOT APPLICABLE
		IMO ELEMENTS				_															
	200	SOLAS 1974																			
	201	SOLAS, General Provisions					0		0												
	201.1	Compliance with General Provisions																			
	201.2	Compliance with IGC Code																			
	212	SOLAS Certificates					0		0												
	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							0				0								
		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 ENCs 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 ENCs 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.)					1							-		ı	•				
	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)																			

		CHECKLIST - BASIC CRITERIA - OFFICE AUD	IT -	LP	G C	ARI	RIER	R- VI	ERS	ION	1 202	23									
Revision Code	Norm item	BASIC Office - LPG	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.	NOT APPLICABLE
	300	MARPOL 73/78																			
	301	Provisions concerning Reports on Incidents Involving Harmful Substances (Protocol 1)			0				0				0								
		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			0				0				0								
	310.1	Does SMPEP/SOPEP (as applicable) 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)																			
		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?																			
	1310 /	Does the company have a policy concerning the retention and disposal of oil residues (sludge)?																			
	320	Prevention of pollution by Cargo			0		0		0												
	320.1	Is a shipboard marine pollution emergency plan developed? (SMPEP)																			
	320.2	Is training and testing of the pollution emergency plan done?																			\Box
	320.3	Is the plan reviewed? (periodic and event review)																			\Box
	320.4	Is office personnel familiar with the shipboard marine pollution emergency plan?																			\Box
	350	Prevention of pollution by garbage			0		0		0												
		Has the company developed a ship specific garbage management plan detailing the specific ship's equipment, arrangements and procedures for the handling of garbage?											•		,						
		Is it a company policy to designate a person responsible for execution of the garbage management onboard?																			

APPENDIX 2

CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - LPG CARRIER

(PMC-07)

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - L	_PG	CA	RRIE	ER -	· VER	SIO	N 20)23									
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	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					0	(D												
	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	Is an evaluation of the Hot Work permit made (permit shows the appropriate safety precautions relevant to the location of work)?																		0	20
	1200.12	Is the HSQ Manager designated to authorise hot work?																		0	20
	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
	1200.8	Are all personnel entering an enclosed space provided with a personal gas detector which can measure oxygen, flammable gases or vapours (% of LFL), carbon monoxide and hydrogen sulphide?																		0	10
	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)?																		0	10
	1200.10	Does the company require a responsible officer to be 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
	1200.16	Does the company provide ship specific lists that identify onboard enclosed spaces?																		0	5
	1200.17	Does the company specify PPE appropriate for low temperatures and liquefied gases cargoes?																		0	5
												score					,		•	0	110
		Compressor for the refilling of six artifulars for breathing appropriate on Attached Additional			Minir	num	rankin	ng sco	ore req	uired 1	for el	ement 1	200 = 1	10							
	1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement					0	•	0												
	1300.1	Is it company policy that the vessels 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
												score		_						0	20
					Minir	num	rankin	ng sco	ore req	uired 1	tor el	ement 1	300 = 1	U							

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - Ι	LPG	G C/	ARR	IER	- VEI	RSIC	ON 2	2023	3										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту 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
	1400	Control of drugs & alcohol onboard / Medical examination								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
					Mini	imur	n rank	cina s	core rec	nuired		al sco		100 = 3	30							0	55
	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
					Min	imur	n rank	rina e	core red	nuired		al sco		500 - 3	25							0	45
	1510	Emergency Oil Recovery				III	raile	ung s	0016160	quireu	101	J.C.I.I.C		,00 = Z									
	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
					Min	imum	n rank	cina s	core red	quired		al sco		510 = C)							0	10
		L						9 0	- 5.0.00						-								

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI	T -	LPC	G C/	ARR	RIER	R - V	ERS	ON	202	3											1
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	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	
	1600	Computer Systems, Networks, Data Security and Training. GA requirement			0													0						ł
	1600.1	Are arrangements for shore and vessel systems documented ? (configuration scheme)																				0	10	
	1600.2	Are adequate system back-up's for office administrative PC systems made (where applicable) and are procedures for this documented ?																				0	5	
	1600.7	Is there a policy that system back-ups for vessel computer-based systems are made (where applicable)?																				0	5	
	1600.8	Is there a policy that system back-ups for vessel administrative PC systems are made?																				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 department?																				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 for administrative PC systems in the office ?																				0	10	
					las:					reguire		tal so		200	10							0	65	ł
	1610	Cyber Risk Management			WIIN	imun	n rani	king s	score	require	ea for	eieme	ent 10	500 = 4	ŧU									i
	1610.1	Does the company have plans and procedures of cyber risk management (cyber risk policy) incorporated within its Safety Management System (SMS)?																				0	20	
	1610.3	Does the cyber risk policy differentiate between IT (information technology) and OT (operational technology) systems?																				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	Does the company designate and train personnel as appropriate to identify and respond to cyber threats to the company's information technology systems?																				0	5	
	1610.6	Does the company have a policy in place to build new ships equipped with cyber secure systems and components?																				0	5	
	1610.7	Does the company have a set of clear and unambiguous cyber risk requirements that reflect the company's expectations to vendors and agents?																				0	5	
	1610.8	Does the company have a policy to carry out cyber risk assessments on its ships (at an interval deemed suitable by the company) using either of the following: - self-assessments followed by third party risk assessments - penetration tests of critical IT and OT infrastructure performed by external experts simulating cyber attacks?																				0	5	
	1610.9	Does the company provide its ships with contingency plans and related information in a non- electronic form that need to be followed in the event of a cyber attack?																				0	5	
	1610.10	Is it a company policy to involve IT department while preparing to purchase OT systems for ships?																				0	5	
	1610.11	Does the company use the information from investigations of previous identified cyber incidents to improve the technical and procedural protection measures and response plans on board and ashore?																				0	5	
	1610.12	Does the company forbid remote access by technicians and manufacturers to on-board systems without authorization by the vessel's senior leadership team (For example, by following a two-step digital authorization process)?																				0	5	
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		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI	T - I	LPG	C/	RRIE	R - \	/ER	SIC)N 2	023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Joc. & Impl.	аиашту DEPT.	Joc. & Impl.	rechnical DEPT.	NAUTICAL DEPT.	Joc. & Impl.	PERSONNEL DEPT.	Joc. & Impl.	OPER./CHART DEPT.	Joc. & Impl.	PURCHASING DEPT.	Occ. & Impr.	FINANCIAL DEPT. Joc. & Impl.	T DEPT.	Joc. & Impl.	NS- / CLAIM DEPT.	Joc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	1700	Noise and Vibration Management			Ĭ							Ĭ					Ī	Ī					
		Noise/Vibration Monitoring and Measures													•								
	1700.1	Is it company policy to verify the noise survey report every 5 years?															T				П	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
					India:		ranking			uirad		al sco		00 – 26	_							0	65
	1710	Underwater Noise and Vibration Management				IIIuiii	ranking	3001	requ	uneu	101 6	lemer	1	00 - 2	Ī								
	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	durin	ng aud	dit*													,				
	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?																			1	0	5
											_	al sco			_						\vdash	0	30

	CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - Ι	_PG	G CA	ARR	IER ·	- VEI	RSIC	N 2	2023											
Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту 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.	ІТ DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE		RANKING MAX. SCORE
1800	Social Dimension / Sustainability		_													_						
	A. Good Health & Well-Being							•														
1800.1	Does the company ensure that all vessels under its control have an ITF or similar agreement in place?																			(ı	10
1800.2	Does the company have procedure regarding relieving shipboard personnel on compassionate grounds? (For example, in case of a family emergency)																			•	ı	5
1800.3	Is the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice?)	5
1800.4	Does the company ensure that the shipboard staff is aware of platforms (online/offline) providing access to emotional support networks to tackle mental health issues?)	5
1800.5	Does the company provide access to the internet at all times for shipboard personnel on board all ships under its control?																			•	ı	5
	B. Reduced Inequalities / Equal Opportunities / Diversity																					
	B.1 General																					
1800.6	Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc. to prevent and eliminate discrimination at workplace (office and ship)?)	10
1800.7	Does the company have confidential reporting procedures enabling all employees to report harassment & discrimination?																				ı	5
1800.8	Does the company take steps to create awareness among its staff (on shore & off shore) and to ensure effective implementation of its policies focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc.?																			•		5
	B.2 Gender-specific																					
1800.10	Does the company take steps to promote and achieve gender diversity/equality at office and on board vessels (at all levels)?																			(ı	10
1800.11	Does the company provide the following specific facilities for its women seafarers: - feminine hygiene items (in bonded stores) & separate disposal facilities on board - separate washrooms with sanitary facilities on board - suitable sized (gender specific) safety and protective clothing on board - access to medical supplies without having to consult male colleagues on board)	5
	C. Sustainability Reporting																					
1800.12	Does the company prepare and publish its performance on environmental, social and governance criteria annually (in line with internationally recognised frameworks, such as GRI, IIRC and SASB standards)?																					20
		<u> </u>											00 4-									85
	1800 1800.1 1800.2 1800.3 1800.4 1800.5 1800.6 1800.7 1800.8	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being 1800.1 Does the company ensure that all vessels under its control have an ITF or similar agreement in place? 1800.2 Does the company have procedure regarding relieving shipboard personnel on compassionate grounds? (For example, in case of a family emergency) Is the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1800.4 Does the company provide access to the internet at all times for shipboard personnel on board all ships under its control? B. Reduced Inequalities / Equal Opportunities / Diversity B.1 General Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc. to prevent and eliminate discrimination at workplace (office and ship)? 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B.2 Gender-specific 1800.10 Does the company take steps to promote and achieve gender diversity/equality at office and on board vessels (at all levels)? Does the company take steps to promote and achieve gender diversity/equality at office and on board vessels (at all levels)? Does the company take steps to promote and achieve gender diversity/equality at office and on board vessels (at all levels)? Does the company t	RANKING Office - LPG	RANKING Office - LPG	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being Does the company ensure that all vessels under its control have an ITF or similar agreement in place? Does the company have procedure regarding releiving shipboard personnel on compassionate growing for seeking medical advice? 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A General Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc. to prevent and eliminate discrimination at virisplace (fiftice and ship)? Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-harassment, etc. to prevent and eliminate discrimination at virisplace (fiftice and ship)? B. 2 Gender-specific C. Sustainability Reporting Does the company take steps to promote and achieve gender diversity/equality at office and on board vessels (at all levels)? C. Sustainability Reporting Does the company prepare and publish its performance on environmental, social and governance e	Part Part	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being Does the company have procedure regarding releving shipboard personnel on compassionate grounds? (For example, in case of a family emergency) Island to seeking medical advice? Does the company provide access to the internet at all times for shipboard personnel on board all ships? B. Reduced Inequalities / Equal Opportunities / Diversity B. General Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, arti-descrimination, anti-barassment, etc. to prevent and eliminate discrimination Does the company have a policy focusing on subjects such as equal employees to report and eliminate discrimination? Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, arti-descrimination, anti-barassment, etc. to prevent and eliminate discrimination? Does the company have conditional reporting procedures enabling all employees to report and efficient of the policy of the condition of the policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, arti-descrimination, anti-barassment, etc. to prevent and eliminate discrimination? Does the company have an policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, arti-descrimination? Does the company have conditional reporting procedures enabling all employees to report and eliminate discrimination? Does the company have procedure enabling all employees to report and eliminate discrimination? Does the company have procedure enabling all employees to report and effective implementation of shorts and ship? Does the company have procedure enabling all employees to report and effective implementation of ship policies focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-descrimination? Does the company provide the following specific facilities for its women seafarers:	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being 1900. 2 Does the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 3 She company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 4 Does the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 5 Dees the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 6 Dees the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 7 Dees the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 8 Dees the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 9 Dees the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? 1900. 1 Dees the company shows a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, and-informination, ani-harassment, etc. 7 or applications of the company shows also to create awareness among its staff (on shore & off shore) and to ensure effective implementation of its policies focusing on subjects such as equal opportunities, equality and diversity, inclusion, ani-informination, ani-harassment, etc.? 1900. 1 Dees the company provide the following specific facilities for its women seafarers: 1900. 1 Dees the company provide the following specific facilities on board — separate wastrooms with sanitary facilities on board — access to medical supplies without having to consult make colleagues on board — access to medical supplies without having to cons	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being Does the company suscepted to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? Social Dimension / Sustainability A. Good Health & Well-Being Does the company have procedure regarding relieving shipboard personnel on compassionate grounds? (For example, in case of a family emergency) Is the company suscepted to any digital platform (web or app) that can be referred to by shipboard staff for seeking medical advice? B. Reduced Inequalities / Equal Opportunities / Diversity B. 1 General Does the company have a policy focusing on subjects such as equal opportunities, equality and diversity, inclusion, anti-discrimination, anti-harassment, etc. or prevent and eliminate discrimination at workplace (office and ship)? Does the company provide access to the internet at all imes for shipboard personnel on board all ships under its control? B. Reduced Inequalities / Equal Opportunities / Diversity B. 1 General Does the company have procedure senabling all employees to report harassment & discrimination, anti-harassment, etc. or prevent and eliminate discrimination at workplace (office and ship)? B. 2 Gender-specific Does the company provide the following specific facilities for its women seafarers: - Fortial score Total score Total score Total score Total score	RANKING Office - LPG Social Dimension / Sustainability A. Good Health & Well-Being 1900. Does the company resure that all vessels under its control have an TF or similar agreement in place? Does the company subscribed to any digital platform (web or app) that can be referred to by shipboard staff is sowner or glated makes and advice? 1900. Social Dimension / Sustainability A. Good Health & Well-Being 1900. Does the company resure that all vessels under its control have an TF or similar agreement in place? 1900. 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Good Health & Well-Being Does the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that all vessels under its control have an ITF or similar agreement in place of the company wasver that the vessels under its control have an ITF or similar agreement in place of the company wasver between the place of the company wasver between the place of the place of the company wasver between the place of the	RANKING Office - LPG Social Dimension / Sustainability A. 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A General Social Company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the company have a policy focusing on subjects such as equal opportunities, equality and working the focus of the company have a policy focusing on subjects such as equal opportunities, equality and working the focus of the company have a policy focus on the company have a policy focus on the company have a policy focus

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		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI	Γ - Ι	.PG	CA	RRIE	ER -	VEF	RSIO)N 2	023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl. NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.		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
	2000	NAVIGATION / BRIDGE OPERATIONS																				
	2100	Navigation						0)			0										
	2100.6	Does the company have a contract for automatic supply of new hydrographic publications?																			0	10
	2100.7	Does the company have a contract for electronic update of hydrographic publications? (eg. Temporary and Preliminary NtM)																			0	10
	2100.8	Is it a company policy to include navigational equipment in electronic Planned Maintenance System?																			0	10
	2100.9	Are masters entitled to use non-compulsory pilot services? (must be stated in a company procedure)																			0	10
	2100.12	Is the company aware of the vessel's critical areas transiting?																			0	10
	2100.13	Does the company use weather routing services for ships on long haul voyages?																			0	10
	2100.18	Is it a company policy to enrol the vessels in a meteorological & oceanographic service in a form of a software application?																			0	10
	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?																			0	5
	2100.14	Does the company have instructions for navigating in sensitive areas? (IMO SN/Circulars)																			0	10
	2100.15	Is it a company policy to equip vessels with the multi constellation GNSS receivers?																			0	10
	2100.16	Is it a company policy to equip vessels with the eLoran receivers?																			0	10
	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?																			0	20
												l score									0	120
					Minim	num	rankin	ng sco	re req	uired	tor e	lement	2100 =	= 50								

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - Ι	_PG	CA	RRI	ER -	· VE	RSI	ON 2	2023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT. Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	т рерт.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE RANKING SCORE		RANKING MAX. SCORE
	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)																			d	ı	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)?																			C	ı	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?																			d		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)?																			C		5
	2111.8	Does the company have a contract / agreement with ECDIS manufacturer in relation to the maintenance of the software?																			C	ı	5
	2111.11	Does the company have a standard for display settings (layers) of ECDIS for various navigation conditions (arrival / departure - coastal - deep sea)?																			C	ı	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)?																			d		10
					Minir	mum	ranki	na ec	ore re	quiro		al sco		11 = 35							C		60
	2120	Fuel Change Over / Ballast Water Exchange			0		·unki		01616	441161		О											
	2120.1	Is it company policy that the voyage plan (checklist) include when fuel change over should be carried out?																			C		10
	2120.2	Is it company policy that the voyage plan (checklist) include when ballast water exchange can be carried out?																			C		10
					Mini		ronl-!	na a-				al sco		20 - 20							C		20
	2300	Mooring Operations			WIINII	mum	ranki		ore re	quire	a tor e	eremen	L 212	20 = 20									
	2300.1	Does the company have procedures/instructions for mooring/unmooring operations?																					10
		Dood the company have procedures/instructions for mooning-difficulting operations:								1	Tot	al sco	re				1						10
					Minir	mum	ranki	ng sc	ore re	quire	d for e	elemen	t 230	00 = 10									

	CHECKLIST - RANKING CRITERIA - OFFICE AI	JDI.	T - L	_PG	CA	RR	IER	- VE	RSIC	ON 2	2023											
Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	ger a mbr.	FINANCIAL DEPT. Doc. & Impl.		Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
3000	MACHINERY / ENGINE OPERATIONS																					
3100	Bunker Operations					0					0											
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	·																				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
							•							•				•	•		0	50
				Mini	mum	rank	ing s	core re	quirec	l for e	elemei	nt 310	00 = 50	0				1				
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
	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
				Mini										•							0	50
	33000 3100 3100.1 3100.2 3100.3 3100.4 3100.5 3101.1 3101.1 3101.2 3101.3	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations 3000.1 Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) 3100.2 Is a checklist used for bunker operations (company format)? 3100.3 Does the bunker procedure include a bunker plan (company format)? 3100.4 Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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? 3101.1 Does the company SMS specify that only a relevant IAPH LNG bunkering checklist must be used? 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? 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? 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? 3101.5 Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations Boos the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Bloo.2 Is a checklist used for bunker operations (company format)? Bloo.3 Does the bunker procedure include a bunker plan (company format)? Broo.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? Bloo.5 Is to company SMS specify that only a relevant IAPH LNG bunkering checklist must be used? Broo.5 Is to 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? Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? 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? Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) 1300.2 Is a checklist used for bunker operations (company format)? 1300.3 Does the bunker procedure include a bunker plan (company format)? 13100.5 Is there an instruction that all persons involved are to be familiar with the intended bunker operation and/or internal transfer operation and/or internal transfer operation and their duties? 13101.1 Does the company SMS specify that only a relevant IAPH LNG bunkering checklist must be used? 13101.2 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? 13101.3 Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? 13101.4 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? 13101.5 Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Boos the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Is a checklist used for bunker operations (company format)? Boos the bunker procedure include a bunker plan (company format)? Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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? Minit Bunker Operations - LNG Bunker Operations - LNG 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? Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? 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? Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG WACHINERY / ENGINE OPERATIONS Bunker Operations Boos the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Is a checklist used for bunker operations (company format)? Boos the bunker procedure include a bunker plan (company format)? Boos the bunker procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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? Minimum Bunker Operations - LNG Bunker Operations - LNG 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? Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? 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? Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG Way 10 10 10 10 10 10 10 1	RANKING Office - LPG Way 10 10 10 10 10 10 10 1	RANKING Office - LPG Way To go and Description The Company of the Company format Part of the Com	RANKING Office - LPG WACHINERY / ENGINE OPERATIONS Bunker Operations 300.1 Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) 3100.2 Is a checklist used for bunker operations (company format)? 3100.3 Does the bunker procedure include a bunker plan (company format)? 3100.4 Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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/or internal transfer operation and their duties? Minimum ranking score requirect and/or internal transfer operation and their duties? Minimum ranking score requirect procedure 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? Does the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? 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? Does the company provide thermal imaging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)?	RANKING Office - LPG Way Discreption Discreption	MACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Bunker Operations Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Barton State of the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Barton State of the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Barton State of the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Barton State of the company format)? Barton State of the company formation (company format)? Barton State of the company formation of the internal transfer of fuel oil between main storage tanks? Barton State of fuel oil between main storage tank	RANKING Office - LPG WAY WAY WAY WAY WAY WAY WAY WA	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Is a checklist used for bunker operations (company format)? Are there procedure include a bunker plan (company format) and/or internal transfer operation and their duties? Total score Minimum ranking score required for element 3100 - 5 Bunker Operations - LNG Bunker Operation and their duties? Total score Minimum ranking score required for element 3100 - 5 Bunker Operation - LNG Bunker Operation - LN	RANKING Office - LPG MACHINERY / Engine OPERATIONS Bunker Operations Does the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Is a checklist used for bunker operations (company format)? Stone 4 Are there procedure include a bunker plan (company format)? Stone 5 the engine operation and their duties? Minimum ranking score required for element 3100 = 50 Minimum ranking score requir	RANKING Office - LPG Way 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	RANKING Office - LPG MACHINERY / ENGINE OPERATIONS Bunker Operations - LNG Bunker Operations	RANKING Office - LPG WACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Bunker Operations Bunker Operations Stock is used for bunker operations (company format)? Are there procedure/sinstructions for the internal transfer of fuel oil between main storage tanks? 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? Bunker Operations - LNG Bunker Operations - LNG 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? 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? Bunker Operations - LNG Stock is the company provide the smill or provide a dedicated watch (from a safe location) on bunker station during the entire duration of the LNG bunkering? Does the company provide the small amging camera/equipment for leakage detection during unkering on board its LNG-fuelled ships (GA-certified only)? Boes the company provide its shipboard personnel a shore-based training on LNG bunkering? Does the company provide its shipboard personnel a shore-based training on LNG bunkering?	RANKING Office - LPG WACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Bunker Operations Store the bunker porcedure include a bunker plan (company format)? Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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? Total score Total score Total score Total score Store the company SMS specify that only a relevant IAPH LNG bunkering checklist must be used? Is it company policy to ensure that LNG-fuelled ships are equipped with LNG specific PPEs such as protective crogenic gloves and safety goggles with side protection? Boes the company install CCTV on LNG bunker stations for the purpose of observing the bunkering operation from the bridge or operation control room? Store the company provide the small end company forms a safe location) on bunker station during the entire duration of the LNG bunkering? Does the company provide the small anging camera/equipment for leakage detection during bunkering on board its LNG-fuelled ships (GA-certified only)? Does the company provide its shipboard personnel a shore-based training on LNG bunkering? Does the company provide its shipboard personnel a shore-based training on LNG bunkering?	RANKING Office - LPG WACHINERY / ENGINE OPERATIONS Bunker Operations Bunker Operations Bunker Operations Store the company MS specify a safe-maximum percentage fill for bunker tanks? (max. limit 95%) Is a checklist used for bunker operations (company format)? Are there procedures/instructions for the internal transfer of fuel oil between main storage tanks? 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? Total score Total score	RANKING Office - LPG WACHINERY/ENGINE OPERATIONS MACHINERY/ENGINE OPERAT	RANKING Office - LPG WARNING

		CHECKLIST - RANKING CRITERIA - OFFICE AI	JDIT	Γ - Ι	LPG	G C	ARF	RIER	2 - V	ER	SIO	N 2	023	}											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	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
	3200	Fuel oil management																							
		A. Contracting / Procurement												•											
	3200.14	N/A in case charterer is responsible for supplying bunkers (for all GA ships) Is it company procedure that bunker purchasing contracts state that the fuel oil be supplied with reference to ISO 8217 specifications (<u>latest edition is recommended</u>)?																						0	10
	3200.15	N/A in case owner / manager or third party ship manager is responsible for purchasing bunkers (for all GA ships) 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 <u>always</u> 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
	·												al sco												

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - L	_PG	G C	ARF	RIEF	۲ - ۷	ERS	ION	202	3										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	ІТ DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	4000	CARGOES / CARGO OPERATIONS																					1
	4100	LPG Carrier Cargo Operations & Additional Green Award requirements							0			0											
	4100.1	Is it company procedure that the ship shore safety checklist has to be used before loading/unloading operations?																				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
	4100.6	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
	4100.14	Is it a company policy that all ESD points are tested on regular basis?																				0	10
	4100.27	Is it a company policy that a pre-arrival checklist is completed at least within 24 hours and sent to the office at least 12 hrs prior to arrival?																				0	10
	4100.28	Is it a company policy that the vessels send a pre-loading / discharging (cargo) plan to the office?																				0	10
	4100.29	Does the company provide instruction (matrix) for tanks preparation for the next cargo?																				0	10
	4100.30	Does the company provide a step-by-step procedure for the process of draining the loading lines and hoses before loading arms get disconnected?																				0	10
	4100.31	Does the company provide a procedure for carrying incompatible cargoes?																				0	10
	4100.32	Does the company provide procedure for minimizing the vapor loss during tank atmosphere change?																				0	10
	4100.33	Is it a company policy that a leak test of the cargo arm/hose connection to the manifold is conducted prior to commencing the cargo transfer?																				0	10
-			<u> </u>		Mini	imus		kine	coors	requir		otal so		100 1	100							0	150
	4200	Ship to Ship Transfer Operations			INITIAL	iiiuli	ran	KIIIG	Score	requir	eu ioi	eiem	ent 4	100 =	100								
	4200.5	Is it company policy to verify with the STS-operator that approved equipment is used for the intended STS operation?																				0	40
												otal so			!				_			0	40
					Mini	imun	n ran	king	score	requir	ed for	elem	ent 42	200 = 4	1 0								

Spool PREVENTION OF POLUTION			CHECKLIST - RANKING CRITERIA - OFFICE A	UDI.	T - 1	LP	G C	ARR	IER	- V	ERSI	ON	202	3										
Single-process Sing	Revision Code	Norm item		GENERAL MAN.	Doc. & Impl.	алапт рерт.	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.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
Does the company have sith-special procedures interactions (according to file) guidelines) for the control and management of sithes binduring to invalve integration and procedure in dispulsed in the process of invalve angular property. Does the company settine frequency and timing of in-valver inspection and procedure intl cleaning in control and management of sithes binduring of in-valver inspection and procedure in the cleaning in control and management of a temperature in the control inspection and procedure in the cleaning in control and management of a company policy to define potential trigger points for reactive hall cleaning in control and management of a company policy to define potential trigger points for reactive hall cleaning in control and the control procedure in a company policy to use invasor cleaning only in combination with captain and times of the cleaning in a company policy to use invasor cleaning only in combination with captain and times of the cleaning in the control and the control procedure in a company policy to use invasor cleaning of the control procedure in a company policy to use the company time a policy to reduce garbage at source? For example, but packaging of control procedure in the control procedure in a company policy to reduce garbage at source? For example, but packaging of control procedure in the control p		5000	PREVENTION OF POLLUTION																					
Since of the company protein the fundamental of ships bibliouling to maintaine the transfer of invalve aspeats; especies? 1906. 6 1906. 6 1906. 6 1906. 7 1906. 18 is a company protein for the result of the protein of the protein of the protein of the protein of the result of the protein of		5100	Biofouling Management																					
5906. consultation with contings manufacturer and/or coatings consultant for each ship under its 1502.7 Is it a company policy to define potential trigger points for reactive half cleaning – based on 1502.7 Is it a company policy to use in water cleaning only in combination with capture and filtration of the 1502.7 Is it a company policy to use in water cleaning only in combination with capture and filtration of the 1502.7 Is it a company policy to use in water cleaning only in combination with capture and filtration of the 1502.7 Is a company policy to use in water cleaning only in combination with capture and filtration of the 1502.7 Is a company policy to use in water cleaning only in combination with capture and filtration of the 1502.7 Is a company policy that recyclable material such as paper, pleatic, metal (for example, bulk puckaging of 1502.7 Is a company policy that recyclable material such as paper, pleatic, metal (for example, in cann), specials, bulks, cocked, software,		5100.5					•												•		·		0	10
priformanice monitoring or other relevant classes (such as increased drischor)?		5100.6	consultation with coatings manufacturer and/or coatings consultant for each ship under its																				0	5
cleaned material and subsequent waste treatment and disposal, when made available in ports? Waste Management / Garbage Handling Onboard A. General procedures S200.17 Does the company have a policy to reduce garbage at source? For example, bulk packaging of consumable items. S200.17 B. A. General procedures S200.27 Is a company policy that recyclable material such as paper, plastic. metal (for example, in cars), including a source? For example, the port reception to produce the company have a policy to reduce garbage at source? For example, the port reception source? B. Garbage types B. S. Ashes and clinkers B. S. Ashes and clinkers B. A. Cleaning agents & additives S200.23 B. It a company policy that all incinerated ashes and clinkers are always delivered to the port reception facilities? S200.23 B. A. Cleaning agents & additives S200.23 B. A. Cleaning agents & additives S200.23 B. A. Cleaning agents & additives S200.23 B. S. Plastics S200.20 S. It a company policy to use can harmful (MAPPOL, Annex V compliant) cleaning agents and additives for cleaning the deck / external surfaces? B. S. Plastics S200.20 S. It a company policy to use part and additives for cleaning the deck / external surfaces? B. S. Plastics S200.20 S. Dess the company have a policy to reduce the use of disposable and single-use plastics on board (all lesst focusing on plastic cutlery, dishes & straws and beverages & mineral water bottles in bond distors)? S200.40 Does the company have a policy to reduce the use of disposable and single-use plastics on board (all lesst focusing on plastic cutlery, dishes & straws and beverages & mineral water bottles in bond distors)? S200.41 S200.42 Does the company have a policy to reduce the use of disposable and single-use plastics on board (all lesst focusing on plastic cutlery, dishes & straws and beverages & mineral water bottles in bond distors)? S200.43 S200.45 S200.40 Does the company have a policy to reduce the use of disposable and single-use plastics on boar		5100.7																					0	5
S200 Waste Management / Garbage Handling Onboard A. General procedures S200.17 S200.27 S200.27 S200.27 S200.27 S200.27 S200.28 S200.29 S200.29 S200.29 S200.29 S200.29 S200.29 S200.20 S2		5100.8																					0	10
A. General procedures S200.17 A. General procedures S200.17 S200.27 S200.27 S200.27 S200.27 S200.27 B. Garbage types S. Jackses and clinkers S200.28 S. Jackses and clinkers S200.28 S. Jackses and clinkers S200.29 S. It a company policy that all incinerated ashes and clinkers are always delivered to the port reception facilities of reception facilities of the policy of the policy for the polic			ordanica material and subsequent waste treatment and disposal, when made available in ports:			<u> </u>		<u> </u>															0	30
A. General procedures 5200.17 Does the company have a policy to reduce garbage at source? For example, bulk packaging of content of the port reception facilities? 8. Santage types 8. Santage types 8. A Clean gay policy that plastic is never incinerated? 8. A Clean gay policy to use non-harmlul (MARPOL Amex V compliant) cleaning agents and additives for cleaning the dock / external surfaces? 5200.25 Santage types 8. A Cleaning agents & additives 8. A Cleaning agents & additives 8. A Cleaning agents & additives 8. Santage type is a company policy to use non-harmlul (MARPOL Amex V compliant) cleaning agents and additives for cleaning the dock / external surfaces? 8. Santage type is a company policy to use non-harmlul (MARPOL Amex V compliant) cleaning agents and additives for cleaning the dock / external surfaces? 8. Speace 8. Santage type is a company policy to use non-harmlul (MARPOL Amex V compliant) cleaning agents and additives for cleaning the dock / external surfaces? 8. Speace 8. Speace 8. Santage type is a company policy to use non-harmlul (MARPOL Amex V compliant) cleaning agents and additives for cleaning the dock / external surfaces? 8. Speace 9. Speace 9. Speace 9. Speace 9. Speace 9. Speace 9. Speace						_					equire	ed for	elem	ent 51	00 =	5								
Seal Does the company have a policy to reduce garbage at source? For example, bulk packaging of consumable items. Sin is a company policy that recyclable material such as paper, plastic, metal (for example, tin cars), glass, bottles, crockery & similar refuse, and durinage are always delivered to the port reception facilities.		5200				0		0		0														
Second S			•	<u> </u>		1		,			-,											-		1
Misspectories, crockery & similar refuse, and dunnage are always delivered to the port reception facilities? B. Garbage types B. 3. Ashes and clinkers 5200.25 B. 4. Cleaning agents & additives B. 4. Cleaning agents & additives B. 4. Cleaning agents & additives Secondary policy to use non-harmful (MARPOL Annex V compliant) cleaning agents and additives for cleaning the deck / external surfaces? B. 5 Plastics 5200.28 B. 5 Plastics 5200.38 Does the company policy that plastic is never incinerated? Does the company have a policy to reduce the use of disposable and single-use plastics on board (at least focusing on plastic cultery, dishes & straws and beverages & minieral water bottles in board and example, replacing small yoghut pots with decanted supplies in large containers)? S200.41 Does the company have a policy to avoid procuring food items in single servings of plastics pots (for example, replacing small yoghut pots with decanted supplies in large containers)? S200.42 Does the company have a procedure that clearly stipulates there should be no dumping of old plastic ropes and mooring lines at see and encourage to retain them on board until landed ashore for correct disposal? S200.16 Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? 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)		5200.17																					0	5
Sample S	M	5200.22	glass, bottles, crockery & similar refuse, and dunnage are always delivered to the port reception																				0	5
Sit a company policy that all incinerated ashes and clinkers are always delivered to the port reception facilities? B. At Cleaning agents & additives			B. Garbage types																					
B.A Cleaning agents & additives B.A Cleaning agents additives S200.28 Is it a company policy to use non harmful (MARPOL Annex V compliant) cleaning agents and additives for cleaning the deck / external surfaces? B.5 Plastics S200.20 Is it a company policy that plastic is never incinerated? 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)? S200.41 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)? S200.42 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? Does the company have a procedure that clearly stipulates there should be no dumping of old plastic ropes and mooring lines at sea and encourage to retain them on board until landed ashore for correct disposal? C. Additional questions S200.16 Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs? Does the company participate in national / international Marine Litter Monitoring Programs?			B.3 Ashes and clinkers																					
S200.28 Is it a company policy to use non harmful (MARPOL Annex V compliant) cleaning agents and additives for cleaning the deck / external surfaces? 10 10 10 10 10 10 10 1		5200.25																					0	10
additives for cleaning the deck / external surfaces? B.5 Plastics 5200.20 Is it a company policy that plastic is never incinerated? 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)? 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)? 5200.42 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)? 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? Does the company have a procedure that clearly stipulates there should be no dumping of old plastic ropes and mooring lines at sea and encourage to retain them on board until landed ashore for correct disposal? 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? 5200.18 Does the company participate in national / international Marine Litter Monitoring Programs? 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)			B.4 Cleaning agents & additives								-												•	
Section Sect		5200.28																					0	10
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)? 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)? 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? M 5200.43 Does the company have a procedure that clearly stipulates there should be no dumping of old plastic ropes and mooring lines at sea and encourage to retain them on board until landed ashore for correct disposal? 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? 5200.18 Does the company participate in national / international Marine Litter Monitoring Programs? 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) Total score 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10			B.5 Plastics																					
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ship's washing machine's outlets to prevent fibres reaching the ocean? Does the company have a procedure that clearly stipulates there should be no dumping of old plastic ropes and mooring lines at sea and encourage to retain them on board until landed ashore for correct disposal? C. Additional questions Does the company provide training / education programme for the crew in order to create awareness in relation to garbage management? Does the company participate in national / international Marine Litter Monitoring Programs? 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) Total score O 80		5200.41																					0	5
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5200.16 Does the company provide training / education programme for the crew in order to create awareness in relation to garbage management? 5200.18 Does the company participate in national / international Marine Litter Monitoring Programs? 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) Total score 0 80	M	5200.43	ropes and mooring lines at sea and encourage to retain them on board until landed ashore for																				0	5
awareness in relation to garbage management? 5200.18 Does the company participate in national / international Marine Litter Monitoring Programs? 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) Total score 0 30			C. Additional questions																					
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) Total score 0 80		5200.16																					0	5
types of garbage? (such as GISIS by IMO or equivalent) types of garbage? (such as GISIS by IMO or equivalent) Total score 0 80		5200.18		L																			0	5
		5200.19		lacksquare																				
						Min	nimum	n rank	ring c	core	oquir				200 -	30							0	80

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Kevision Code	Norm item	RANKING Office - LPG	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.	NOTAPPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5410	NOx Emissions		_	0		0																
		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 YE	ES, (choc	ose f	rom I	elow	optic	ns													
		Direct Water Injection																					/
		Fuel Water Emulsification																				/	-
		Intake Air Humidification																			/		
		Slow Steaming			1		ı			1			- 1		- 1				1				
	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)			1														1				
	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? *The guidelines set out in MEPC.259 (68) are applicable to EGR bleed-off discharge water as well.																				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? *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.																				0	5
		Selective Catalytic Reduction (SCR)																					
	5410.26	Does the company install a monitoring unit which monitors and measures any formation of ammonia slip? *The monitoring unit should be capable of issuing a warning in the event of ammonia formation.																				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? *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.																				0	5
												al scc					-				_		95

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI	Γ - L	_PG	CA	RRI	IER	- VEF	RSIC	N 2	2023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Joc. & Impl.	аиапту рерт.	Joc. & Impl.	TECHNICAL DEPT.	Joc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Joc. & Impl.	PURCHASING DEPT. Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	T DEPT.	Joc. & Impl.	NS- / CLAIM DEPT.	Joc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5420	SOx Emissions	Ĭ		0		0						_	0	Ī								
		A. Emission Monitoring					'							•		'							
	5420.11	Does the company use a continuous emission monitoring system (in-situ or extractive) for monitoring and recording SOx emissions?																				0	10
		B. Emission Reduction																					
	5420.12	Main and auxiliary engines: Does the company <u>voluntarily</u> burn low sulphur fuel (max. 0.10% sulphur) or use equivalent methodology during the ship's stay at every port? (If exhaust gas cleaning system is used, sulphur content is measured with SO2:CO2 ratio. Ratio of max 4.3 is equal to 0.10% sulphur content)																				0	50
		C. Additional Questions																		·			
		Exhaust Gas Cleaning System (EGCS)																					
	5420.13	Does the company use the requirements of Scheme B* (continuous emission monitoring with parameter checks) for testing, survey, certification and verification of EGC systems on board all its ships having such systems (EGC)? * Under scheme B, the SOx emissions compliance plan (SECP) should present how the continuous monitoring of ship exhaust gas emissions will demonstrate that the total SO2(ppm)/CO2(%) ratio is comparable to the requirements of 14.1 and/or 14.4 of MARPOL Annex 6. * Ships should be in possession of EGC technical manual, scheme B (ETM-B).																				0	20
	5420.14	Are negative test results from the continuous monitoring of wash water discharge collected from the ship and addressed by the company? *The wash water discharge criteria have been set out in MEPC.259 (68).																				0	10
	5420.16	Does the company take adequate measures to avoid breakdown of the EGCS unit? Measures should include (all of) the following: 1. Material requisitions 2. Redundancy 3. Risk of condensation 4. Safety process regarding handling and storage of caustic soda. 5. Noise prevention 6. Contingency plan for failure 7. Remote monitoring 8. Technical support from the manufacturer (Telephone helpline)																				0	20
	5420.20	Does the company's PPE matrix include handling of caustic soda for closed-loop scrubbers?											T									0	5
	5420.21	Does the company provide relevant crew with manufacturer training course for the EGC unit?																				0	5
			<u> </u>		B. O. C.				core rec			al sco		00 00								0	120

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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															
	5421.1	Has the company carried out a safety assessment with respective manufacturers, for any necessary modifications to the vessel's boilers and each fuel system onboard? (modifications should be class approved)																			0	30
	5421.2	Does company policy require updated fuel change over procedures (company approved) to be available onboard for the main engine, auxiliary engines and boilers? (procedures should be available for each fuel type used onboard)																			0	10
			<u> </u>									l score									0	40
			▙		Mini	imum		ng sc	ore rec	uired	for el	ement	5421 :	= 40								
	5430	Particulate Matter (PM) Emissions					0											4				
	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 Y	ES, d	choo	se fi	rom b	elow	optio	ns												
		Diesel Particulate Filter	Ī																			
		Diesel Oxidation Catalyst																				
		Electrostatic Precipitator	Ī]/	_	
												l score									0	30
					Mini	mum	ı ranki	ng sc	ore rec	uired	tor el	ement	5430 :	= 0								

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Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	Doc. & Impl.	TECHNICAL DEPT.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.		PURCHASING DEPT. Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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 CO2 emissions from emission monitoring equipment (grams CO2 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 (CO ₂ 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 YI	ES, d	hoc	ose f	rom be	low o	ption	ns an	d fill	-in su	pple	ement	CO2	- Glo	MEE	P ta	b				
		Measures related to Machinery										-	Ī	-									$\overline{\mathcal{I}}$
		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																			<u>/ </u>		
	5440.16	Has the company achieved an annual average reduction of at least 2.0% in CO2 emissions per transport work (gCO2/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 CO2 emissions per transport work (gCO2/tnm) since 1st Jan 2013?																				0	15

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	Γ - Ι	LPG	C/	ARRIE	ER -	VER	RSIO	N 2	023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиапту рерт.	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
		Mid term goals (CO ₂ reduction through the use of low carbon fuels)		_																		
	5440.18	Main engines:																			0	15
		Does the company have any vessels within their fleet which use low carbon fuels such as:	It VE		<u></u>	f	rom be	olove e	4:													
		Low carbon fuels	111 7 E	_S, (1100	se II	OIII DE	SIOW (ptioi	13	- 1		1		1	-		1				
		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 =	=																Į,	/		
	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 YE	ES, d	choos	se fr	rom be	elow o	ption	าร									•		•	
		LNG (Liquefied Natural Gas)																				
		LPG (Liquefied Petroleum Gas)																				/
		GTL (Gas to liquid) fuel																				/
		Bio-diesel																			/	<i>'</i>
		Bio-LNG (Bio-methane)																				
		Methanol																			/	
		Ethanol	1										1								/	
		Dimethyl Ether	1										1							/	/	
		Other: *fill during audit*																				
		If others =			1			1		1			1		l	1		1		/		

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Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	QUALITY DEPT.	Doc. & Impl.	TECHNICAL DEPT.	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	MAX.
		Long term goals (CO ₂ neutral operation through zero carbon fuels)																						
	5440.20	Main engines: Does the company have any vessels within their fleet which use zero carbon fuels such as:																					0 2	25
		Zero carbon fuels	If Y	ES, c	choos	se fr	rom be	low c	ptior	ıs	ļ		!							l .		l		
	1	Anhydrous Ammonia		-,				T																\neg
		Hydrogen											1										,	
		Fuel Cells (Powered by ammonia or hydrogen)																						
		Batteries	1										T		1									
		Nuclear											T											
		Other: *fill during audit*											T									/	<i>'</i>	
		If others	-																					
	5440.21	Auxiliary engines: Does the company have any vessels within their fleet which use zero carbon fuels such as:																					0 2	25
		Zero carbon fuels	If Y	ES,	choos	se fr	rom be	low c	ption	ıs														
		Anhydrous Ammonia																						7
		Hydrogen																					/	/
		Fuel Cells (Powered by ammonia or hydrogen)																						
		Batteries																						
		Nuclear																						
		Other: *fill during audit*																						
		If others	=			-	1															Д,		
	5440.22	Does the company have any vessels within their fleet which use renewable energy sources for energy production such as:																					0 2	25
	1	Renewable Energy source	If Y	ES,	choos	se fr	rom be	low c	ption	ıs														\perp
		Wind *fill during audit*																					,	
		Solar						_																
		Other: *fill during audit*			ļ																			
		Wind	1																			/	/	
		If others	-		1						- 1		1		1					1		Ζ,	1	_
	5440.24	Does the company take steps to facilitate JIT Arrival of ships (for example, use of BIMCO's Virtual Arrival Clause for Voyage Charter Parties or speed decisions taken by the Master of owned ships to ensure JIT Arrival or implement measures from Port Information Manual by International Taskforce Port Call Optimization or other such measures)?																					0 1	10
	1		<i>,,,,,,,,,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,		na: - ·							al sco		40 -	_								0 20	JO
	1				Minir	mum	rankin	g sco	re req	uired	tor e	ıemen	t 54	40 = 0	J									

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Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	EINANCIAL DEDT	FINANCIAL DEFI.	IT DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5441	Greenhouse Gas (GHG) Emissions - Methane (CH ₄) 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
					Minir	mum	ranki	ina ec	ore re	auiro		al sco elemer		41 - 0								0	55
	5450	Newbuild policy			0	···uil	O	ng ac	OIE IE	quiret	101	J.GIIIGI	54	-1-0									
	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 CO2 or fuel consumption)?																				0	40
		, , , , , , , , , , , , , , , , , , , ,								-	Tot	al sco	re				-					0	40
						mum		ing sc	ore re	quire	d for e	elemer	nt 54	50 = 0									
	5460	Environmental Ship Index (ESI)			0		0						4										
	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
			,,,,,,,,,,,,					•				al sco			•						Ţ	0	50
					Minir	mum	ranki	ing sc	ore re	quire	d for e	elemer	nt 540	60 = 0									

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Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту рерт.	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
	5500	Sewage Management		_																			
	5500.1	Sewage Treatment Plant Is it company policy to treat the sewage with a sewage treatment plant which uses minimal or no harmful chemicals? Is it company policy to sample and monitor the discharged effluent periodically (at least annually) for																				0	10
	5500.2	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
N	5500.10	Alternative to 5500.1, 5500.2 & 5500.4 (applicable ONLY for short-haul vessels) Is it company policy to ensure that ships deliver all their sewage / sewage sludge (regardless of treated or untreated) to port reception facilities (where available)?																				0	30
		For all ships: Sewage Holding Tank																					
	5500.6	Did the company perform a risk assessment to calculate the capacity of the holding tank?	<u> </u>						\perp		Total	I scor							<u> </u>			0	20 50
					Minin	num ra	nking	score	e requi					0 = 20)							U	30
	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
					Minin	num ra	nkino	score	e reaui			l scor		0 = 0								0	25
	5700	Ballast Water Management				_		0															
						O	,	•															
		For ships required to follow D-1 standard (as per International Ballast Water Management Certificate (IBWMC))																					
	5700.5																					0	5
	5700.5 5700.6	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations																				0	5
		Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry																					
	5700.6	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? Does the company ensure that relevant ships voluntarily comply with D-2 ballast water management																				0	5
	5700.6	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? 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)? For ships required to follow D-2 standard (as per International Ballast Water Management																				0	5
	5700.6 5700.10	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? 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)? For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC)) 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																				0	5 10
	5700.6 5700.10 5700.11	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? 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)? For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC)) 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. 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-																				0 0	5 10 10
	5700.6 5700.10 5700.11	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? 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)? For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC)) 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. 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) 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																				0 0 0	5 10 10
	5700.6 5700.10 5700.11 5700.12	Certificate (IBWMC)) Are tasks & responsibilities of shipboard personnel assigned to ballast water exchange operations defined, documented & controlled? Does the office support the master in cases where the ship cannot reasonably be expected to carry out ballast water exchange? 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)? For ships required to follow D-2 standard (as per International Ballast Water Management Certificate (IBWMC)) 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. 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) 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? Does the company conduct on-board familiarization of relevant crew for the operation of the BWTS																				0 0 0	5 10 10 5

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI.	T - I	LPG	G C	٩RR	IER	- VEF	RSIO	N 2	023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	oc. a mpi.	FINANCIAL DEPT.	Joc. & Impl.	IT DEPT.	NS- / CLAIM DEPT.	Doc. & Impl.	NOTAPPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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
					Mini	imum	rank	ina c	core rec	uirod		al sco		01 – 0								0	30
		Lubrication and Use of Oils (Element nr.: 5810, 5811 & 5812)			I WILLI	mull	i iaiik	ariy S	COLE LEC	uneu	ioi e	iemer	11 301	01=0									
	5810	Stern tube lubrication					0							0									
	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</u> <u>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 air type or void space seal?																				0	25
					Mini		. ronk	ina o	core rec	uirad		al sco		10 - 0								0	60
	5811	Mooring wire lubrication			IVIIIII	IIIIuii	O	ang s	core rec	uirea	ioi e	lemer	_	0									
	5811.1	Is it company policy to use a mooring wire lubricant / grease that is certified according to the EEL?																				0	20
			-									al sco										0	20
	5040	Deals a military and by being the order of a line)			Mini	imum	n rank	ing s	core rec	uired	for e	lemer	_	11 = 0									
	5812 5812.1	Deck equipment lubrication (use of oils)					J							•								0	15
	5812.1	Is it company policy to use grease that is certified according to the EEL (all deck equipment)?	\vdash								- }				+		+		-		+	0	10
	5812.3	Is it company policy to use gear oil that is certified according to the EEL (all deck equipment)? 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?	†														t		T		T	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
												al sco		40 -								0	55
					Mini	imum	ı rank	ing s	core rec	uired	for e	lemer	nt 581	12 = 0									

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Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOTAPPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5820	Management of bilge water and sludge handling onboard		_	0		0		0		0	0				_	_	_						
	5820.3	Is it company policy to familiarize engine room personnel with on board sludge and bilge water management procedures?											1										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
					Mini	imun	n ran	kina	score	oguir		otal s		820 -	. 15								0	25
	5821	Outfitting of bilge water system			0		0	illig	0	<u> </u>	D	0												
		A. Clean Drains (Drains that are normally not 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								-				1				<u> </u>		1				
	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
						•			score			otal s		2004									0	50

		CHECKLIST - RANKING CRITERIA - OFFICE A	UDI	Γ - Ι	-PG	C/	ARR	IER	- VE	RSI	ON 2	2023	3										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	INS- / CLAIM DEPT.	Doc. & Impl.	NOTAPPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5822	Outfitting of sludge handling system		_	0	_	0		0			0			_								
	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
					N#::		1			!		al sc		200	40							0	20
	5900	Ship Recycling - Inventory of Hazardous Materials	0		0	IIIuIII	O	ang s	core r	quire	u ior	eieine	iii əc)22 =	10								
		New buildings - For Owner / Managers and 3rd-party Ship Managers For 5900.1, 5900.12 and 5900.2																			<u> </u>		
	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
		Don't be a series of the phin and to include in the series of the MA series Don't perfect the MA series Don't perfect the series of the series	,																				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	
	5900.2	contains information on the safe removal of hazardous materials? (requirement to be part of the																				0	
	5900.2 5900.10	contains information on the safe removal of hazardous materials? (requirement to be part of the building contract) Existing ships - For Owner / Managers and 3rd-party Ship Managers																				0	40
		contains information on the safe removal of hazardous materials? (requirement to be part of the building contract) Existing ships - For Owner / Managers and 3rd-party Ship Managers For 5900.10 and 5900.13 Is each Green Award-certified company vessel in the possession of an "Inventory of Hazardous																					40
N	5900.10	contains information on the safe removal of hazardous materials? (requirement to be part of the building contract) Existing ships - For Owner / Managers and 3rd-party Ship Managers For 5900.10 and 5900.13 Is each Green Award-certified company vessel in the possession of an "Inventory of Hazardous Materials" (Part I completed)? 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																				0	

		CHECKLIST - RANKING CRITERIA - OFFICE A	JDIT	Τ - Լ	.PG	CA	RRI	IER -	· VEI	RSIO	N 2	023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Joc. & Impl.	аиапту рерт.	Joc. & Impl.	FECHNICAL DEPT.	Joc. & Impl.	Doc. & Impl.	PERSONNEL DEPT.	Joc. & Impl.	OPER./CHART DEPT.	URCHASING DEPT.	Ooc. & Impl.	INANCIAL DEPT.	Ooc. & Impl. T DEPT.	Joc. & Impl.	NS- / CLAIM DEPT.	Joc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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	Alternative to 5910.10 & 5910.12 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	Alternative to 5910.10 & 5910.11 Has a company procedure been implemented within the Management System to audit the recycling facility during the recycling of the company vessels?																			0	5
					Mini	mum	ranki	na so	ore rec	nuirod		al scor		- 60							0	140

	CHECKLIST - RANKING CRITERIA - OFFICE AL	JDIT	- L	PG	CAR	RRIE	R - V	ERS	SION	202	3										
Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	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.	FEET	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
000	MAINTENANCE / SURVEYS																				
100	Programme of Inspections				•	•	0														
100.1	Has the company developed an internal technical inspection programme?																			0	10
100.2	Does the company have relevant previous survey and internal technical inspection reports?								-											0	10
	Does the company have a repair history on each vessel?																			0	10
	Does the company have procedures/instructions for hull / ship's construction condition-inspections to be carried out by ship's personnel?																			0	20
100.6	Does the company have information regarding the relevant maintenance level of the vessel?																			0	10
100.7	Is an owner's inspection report available?																			0	10
												100								0	70
110	Critical and Stand-by Equipment	0		0			Score	requii	red for	elem	ent 6	100 = 1	00								
110 1																				0	10
	Does the list of critical equipment include and specify stand-by equipment for every ship?																			0	10
	Is the feedback from the ship considered in the process of creating a list of critical equipment? (eg. PMS reports)																			0	10
	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
	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
110.6	Are those event reports considered in creating a list of critical equipment?																			0	10
	Is it company policy to install a Computer Based Program for spare parts management of critical equipment and stand-by equipment?																			0	10
	Is it company policy to have safety stock inventory reports for critical equipment and stand-by equipment?																			0	10
	10000 1000 1000.1 1000.2 1000.3 1000.4 1000.6 1000.7 1100.1 110.1 110.3 110.4 110.5 110.6 110.7	MAINTENANCE / SURVEYS 100 Programme of Inspections 100.1 Has the company developed an internal technical inspection programme? 100.2 Does the company have relevant previous survey and internal technical inspection reports? 100.3 Does the company have a repair history on each vessel? 100.4 Does the company have procedures/instructions for hull / ship's construction condition-inspections to be carried out by ship's personnel? 100.6 Does the company have information regarding the relevant maintenance level of the vessel? 100.7 Is an owner's inspection report available? 100.8 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)? 100.9 Does the list of critical equipment include and specify stand-by equipment for every ship? 100.1 Is the feedback from the ship considered in the process of creating a list of critical equipment? (eg. PMS reports) 100.4 Is it company policy to categorize the ship into departments as per TMSA (OCIMF) in the process of creating a list of critical equipment? 100.5 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? 100.6 Are those event reports considered in creating a list of critical equipment? 100.7 Is it company policy to install a Computer Based Program for spare parts management of critical equipment and stand-by equipment?	Office - LPG MAINTENANCE / SURVEYS DOO Programme of Inspections Does the company developed an internal technical inspection programme? Does the company have relevant previous survey and internal technical inspection reports? Does the company have a repair history on each vessel? Does the company have procedures/instructions for hull / ship's construction condition-inspections to be carried out by ship's personnel? 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		CHECKLIST - RANKING CRITERIA - OFFICE A	JDIT	Γ-ι	_PG	CA	RR	IER	- VE	RSI	ON 2	2023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & IIIpi.	FINANCIAL DEPT.	IT DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOTAPPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	6200	Mooring Equipment					0							0									
	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
					Mini	num	ranki	ina s	core re	quire		al sco		00 = 4	5							0	75
	6300	Corrosion Prevention of Seawater Ballast Tanks					0			1	1				Ī								
	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
											Tot	al sco	re									0	75

		CHECKLIST - RANKING CRITERIA - OFFICE A	JDI	T - I	LPG	C/	١RR	IER	- V	ERS	ION	202	3										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	Doc. & Impl.	OPER./CHART DEPT.	Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	Doc. & Impl.	INS-/ CLAIM DEPT.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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
						imum		•				otal s										0	120

	Office - LPG Wy y day of the property of the																				
Norm item		GENERAL MAN.	Doc. & Impl.	аиашту DEPT.	Doc. & Impl.	TECHNICAL DEPT. Doc. & Impl.	NAUTICAL DEPT.		1	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
7000	CREW																				
7100	Employment of Personnel								0												
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?	<u></u>																		0	10
7100.4	Is it company policy to employ ratings on a permanent basis?	<u> </u>																		0	10
				Minin	um r	ankino	. coor	roqui				100 -	^							0	30
7200	Extra Personnel Additional Green Award Requirement						30016	·		leien	lent 7										
7200 1	Is it company policy to employ extra deck officers onboard in addition to what is required by																			0	10
7200 7	Is it company policy to employ extra engine officers onboard in addition to what is required by																			0	10
7200.2																				0	10
																				0	10
																				0	10
7200.4	Is it company policy to employ riding squads to carry out extensive maintenance jobs?																			0	10
7200.9																				0	10
7200.5	Is it company policy to employ a gas engineer onboard?																			0	10
																				0	10
	7000 7100 7100.1 7100.2 7100.3 7100.4 7200 7200.1	RANKING Office - LPG TOOO CREW TOOO Employment of Personnel T100.1 Is it company policy to employ all ship-personnel on a permanent basis? Alternative for 7100.1 (7100.2, 7100.3, 7100.4) Is it company policy to employ senior officers on a permanent basis? Alternative for 7100.1 (7100.2, 7100.3, 7100.4) Is it company policy to employ officers on a permanent basis? T100.2 Is it company policy to employ ratings on a permanent basis? Is it company policy to employ ratings on a permanent basis? T200 Extra Personnel, Additional Green Award Requirement Is it company policy to employ extra deck officers onboard in addition to what is required by minimum safe manning document? Is it company policy to employ extra deck ratings onboard in addition to what is required by minimum safe manning document? Is it company policy to employ extra deck ratings onboard in addition to what is required by minimum safe manning document? 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Alternative for 7100.1 (7100.2, 7100.3, 7100.4) Alternative for 7100.1 (7100.2, 7100.4) Alternative for 7100.1 (710	RANKING Office - LPG WW 1	RANKING Office - LPG Ranking	RANKING Office - LPG WW 15	RANKING Office - LPG WW	RANKING Office - LPG REPS Office - LPG REPS Office - LPG REW REPS Office - LPG REPS OFFI OFFI OFFI OFFI OFFI OFFI OFFI OFF	RANKING Office - LPG Replayment of Personnel Trough Is it company policy to employ serior officers on a permanent basis? Alternative for 7100.1 (7100.2, 7100.3, 7100.4) Replayment of Personnel Alternative for 7100.1 (7100.2, 7100.3, 7100.4) Replayment of Personnel Trough Is it company policy to employ serior officers on a permanent basis? Is it company policy to employ serior officers on a permanent basis? Is it company policy to employ ratings on a permanent basis? Is it company policy to employ officers on a permanent basis? Is it company policy to employ extra deck officers on a permanent basis? 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		CHECKLIST - RANKING CRITERIA - OFFICE A	UDIT	L	_PG	CA	RRI	IER	- VEI	RSIC	ON 2	2023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиапту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	IT DEPT.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	7300	Training / Courses for Personnel Additional Green Award Requirements & IMO Model Courses								0												
	7300.1	Is it company policy that the 2nd officer (deck) must complete an approved Advanced training for Liquified gas tanker cargo operations? (As a minimum, the program should comply with STCW 2010 including Manila amendments Reg V/1-2)																			0	5
	7300.2	Is it company policy that all onboard personnel are trained and qualified according to the approved Basic training for Liquified tanker cargo operations? (as STCW 2010 including Manila amendments Reg V/1-2) (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 1.35) ?																			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	Alternative for 7300.8 & 7300.19 Does the company provide maritime resource management course for all officers?																			0	10

		CHECKLIST - RANKING CRITERIA - OFFICE A	רוסט	T - L	LPG	CA	RRI	IER	- VEF	RSIO	N 2	023											
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	аиашту рерт.	Doc. & Impl.	TECHNICAL DEPT.	Doc. & Impl.	NAUTICAL DEPT. Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	ІТ DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl.	NOT APPLICABLE	RANKING MAX. SCORE	NAIMING III ON COCOL
	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	1	5
	7300.10	Is it company policy to employ cadets by providing training and education in order to recruit future officers?																			0	1	5
		Is it company policy that all senior officers (Master, Chief Officer, Chief Engineer, 2nd Engineer and Gas Engineer) have completed the Liquid Cargo Operations Simulator (LICOS) course as recommended by SIGTTO for senior officers and relevant to cargo containment type?																			0	1	0
	7300.13	Is it company policy that all junior officers (2nd Officer, 3rd Officer, 3rd Engineer and 4th Engineer) have completed the Liquid Cargo Operations Simulator (LICOS) course as recommended by SIGTTO for junior officers and relevant to cargo containment type?																			0	2	0
	7300.14	Does the company have a system in place to monitor officers' competence, training, time in rank and use it as a basis for promotion?																			0	10	0
	7300.15	Is the system as meant in 7300.14 audited and certified by an IACS member classification society?																			0	2	.0
	7300.16	Is it company policy that masters are required to complete a fire fighting training that specifically addresses chemical fires ?																			0	1	5
	7300.17	Is it company policy that all the officers are to complete Security Awareness Training?																			0		
					Minir	num	ranki	ing s	core rec	uired		al score		= 85							0	18	35
	7400	Familiarisation, Additional Green Award Requirement							0	0													
	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	2	0
	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	2	0
_	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	0
	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	0
	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	0
	7400.4	Is it company policy that a company format handover report is requested from all off-signing officers onboard?																			0		Ť
Total score 0 80 Minimum ranking score required for element 7400 = 50									0010 100	uirod				- 50						0	0		

		CHECKLIST - RANKING CRITERIA - OFFICE A	JDIT	I	.PG	C A	ARR	IER	- VE	RSI	ON 2	2023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапт рерт.	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.	ІТ DEPT.	Doc. & Impl.	INS- / CLAIM DEPT.	Doc. & Impl. NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	7500	Safe Manning and Fatigue Management								0												
		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																				
	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
	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
	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 without fearing any action against them for such communication?																			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
					N#: *							al sco		00 = 60							0	95

		CHECKLIST - RANKING CRITERIA - OFFICE A	JDIT	T - L	.PG	CAF	RRIE	R -	VER	SIO	N 20	023										
Revision Code	Norm item	RANKING Office - LPG	GENERAL MAN.	Doc. & Impl.	алапту DEPT.	Doc. & Impl.	Doc. & Impl.	NAUTICAL DEPT.	Doc. & Impl.	PERSONNEL DEPT.	Doc. & Impl.	OPER./CHART DEPT. Doc. & Impl.	PURCHASING DEPT.	Doc. & Impl.	FINANCIAL DEPT.	Doc. & Impl.	ІТ DEPT.	Doc. & Impl.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
9	0000	REQUIREMENTS ACCORDING TO ISO STANDARDS																				
9/	1421	ISO Certification																				
9/	1421.1	Is the company certified for the latest edition of ISO 9001 (quality management systems)?																			0	10
9/	1421.2	Is the company certified for the latest edition of ISO 10015 (quality management – guidelines for competence management and people development)?																			0	10
9/	1421.3	Is the company certified for the latest edition of ISO 14001 (environmental management systems)?																			0	10
94	1421.4	Is the company certified for the latest edition of ISO 22301 (societal security – business continuity management systems)?																			0	10
94	1421.5	Is the company certified for the latest edition of ISO 27001 (information security management systems)?																			0	10
94	1421.6	Is the company certified for the latest edition of ISO 30401 (knowledge management systems – requirements)?																			0	10
9,	1421.7	Is the company certified for the latest edition of ISO 45001 (occupational health and safety management systems)?																			0	10
94	421.8	Is the company certified for the latest edition of ISO 50001 (energy management systems)?																			0	10
94		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?																			0	10
94	421.10	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?																			0	5
					Minim		ankin	~ ~~~				I score ement !		. 0							0	95

	CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - LPG CARRIER - VERSION 202	3			
Norm item	TOTAL SCORE REVIEW OFFICE AUDIT - LPG CARRIER	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	110	110	
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 / Medical examination	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	20	20	
2300	Mooring Operations	0	10	10	
3000	MACHINERY / ENGINE OPERATIONS				
3100	Bunker Operations	0	50	50	
3101	Bunker Operations - LNG	0	50	25	
3200	Fuel oil management	0	120	60	
4000	CARGOES / CARGO OPERATIONS				
4100	LPG Carrier Cargo Operations & Additional Green Award requirements	0	150	100	
4200	Ship to Ship Transfer Operations	0	40	40	
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	

CKL LPG / VERSION 2023 / 1.0 41 of 96

	CHECKLIST - RANKING CRITERIA - OFFICE AUDIT - LPG CARRIER - VERSION 202	3			
Norm item	TOTAL SCORE REVIEW OFFICE AUDIT - LPG CARRIER	OFFICE RANKING SCORE	MAXIMUM OBTAINABLE RANKING SCORE	MINIMUM RANKING SCORE REQUIRED	ELEMENTS WITH NO MINIMUM SCORE
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	
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	0	
5822	Outfitting of sludge handling system	0	20	10	
5900	Ship Recycling - Inventory of Hazardous Materials	0	120	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	90	40	
7300	Training / Courses for Personnel Additional Green Award Requirements & IMO Model Courses	0	185	85	
7400	Familiarisation, Additional Green Award Requirement	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	3565	1445	

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 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".

CKL LPG / VERSION 2023 / 1.0 42 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

GA Code:

ENERGY EFFICIENCY TECHNOLOGIES INFORMATION PORTAL

TECHNOLOGY GROUPS Certificate Holder name:

IMO GLOMEEP Website 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 autotuning, batteries and other solutions.

Υ?	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

CKL LPG / VERSION 2023 / 1.0 43 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

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.

Υ?	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.

Υ?	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

CKL LPG / VERSION 2023 / 1.0 44 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

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)
	<u>Flettner rotors</u>	Use Flettner rotors to generate power from wind energy	Not mature	Dependent on trading area and sufficient free deck-surface
	<u>Kite</u>	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.

Υ?	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.

Proven, new or existing technology/principle, but with limited uptake across the Semi-mature

industry.

Not mature New unproven-, unproven existing- , or proven existing technology/principle but

with very few installations and little to no operational experience.

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.

<u>View disclaimer</u>

CKL LPG / VERSION 2023 / 1.0 45 of 96

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

APPENDIX 3

CHECKLIST - BASIC CRITERIA - SURVEY - LPG CARRIER

(PMC-08)

		CHECKLIST - BASIC CRITERIA - SHIP SURVEY - LPG CAP	RRIE	ER -	· VE	RSI	ION	202	3									
Revision Code	Norm item	BASIC Ship - LPG	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.	אטו ארדויאטני
	100	MANAGEMENT ELEMENTS																7
	101	GENERAL	0															
	101.1	Are the Management System (MS) Manuals maintained and updated?																
	102	SAFETY AND ENVIRONMENTAL PROTECTION POLICY	0		0		0		0	0		0		0		0		
	102.1	Is the company policy concerning safety and the environment available, posted and implemented at all levels?							·									
	103	COMPANY RESPONSIBILITIES AND AUTHORITY	0		0		0		0	0		0		0		0		
	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	0		0		0		0	0		0		0		0		
	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	0															
	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?															\perp	
	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?															\perp	
	105.5	Does the master review the MS and are its deficiencies reported to the shore-based management?															\perp	
	106	RESOURCES AND PERSONNEL AND STCW	0							0								
	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?															\perp	
	106.6	Does ship's personnel receive training/courses which are required in support of the MS?															\perp	
	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?															\perp	
	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?															\perp	
	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 - LPG CAI	RRII	ER -	VE	RSI	ON 2	202:	3								
Revision Code	Norm item	BASIC Ship - LPG	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	NOT APPLICABLE
	107	DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS	0		0	_	_			0	_			_		0	
	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	0		0		0		0	0		0		0		0	
	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?															Ш
	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-CONFORMATIES, ACCIDENTS AND HAZARDOUS OCCURENCES	0		0					0						0	
	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?												<u> </u>			
	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?												L			Ш
	110	MAINTENANCE OF THE SHIP AND EQUIPMENT	0		0					0						0	
	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?												<u> </u>			
	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?												L			Ш
	111	DOCUMENTATION	0		0					0							
	111.1	Does the company have procedures to control documents and data relevant to the MS?												<u> </u>			
	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 ?												1	•		

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		CHECKLIST - BASIC CRITERIA - SHIP SURVEY - LPG CA	RRII	ER ·	- VE	RS	ION	202	3								
Revision Code	Norm item	BASIC Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	NOT APPLICABLE
	112	COMPANY VERIFICATION, REVIEW AND EVALUATION	0		0						0						
	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?															
		IMO ELEMENTS															
	200	SOLAS 1974															
	201	SOLAS General Provisions	0								0						
	201.1	Compliance with General Provisions															
	201.2	Compliance with IGC Code															
	213	Certificates and documents on board	0								0						
	213.1	Are all regulatory certificates valid?															
	216	Maritime security	0														
	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)?															

		CHECKLIST - BASIC CRITERIA - SHIP SURVEY - LPG CAI	יום	- D	\/ C	Dei	ON:	202	2						0.	Onlip O	
	ı	CHECKLIST - BASIC CRITERIA - SHIP SURVEY - LPG CAI	KKIE	-K -	VE	KOI	UN	202	3		1				-		
Revision Code	Norm item	BASIC Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	NOT APPLICABLE
	217	Safety of Navigation / SOLAS chart carriage requirements	0				0										
		Alternative 1: 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?															
		<u>Alternative 2:</u> 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) ?															
	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)															

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		CHECKLIST - BASIC CRITERIA - SHIP SURVEY - LPG CA	RRI	ER -	· VE	RSI	ON	202	3								
Revision Code	Norm item	BASIC Ship - LPG	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	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE
	300	MARPOL 73/78															
	301	Provisions concerning Reports on Incidents Involving Harmful Substances (Protocol 1)	0		0												
	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	0		0		0		0	0		0		0	0		
	310.2	Is SMPEP/SOPEP (as applicable) 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/SOPEP (as applicable)?															
	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?															4
	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?															
	350	Prevention of pollution by garbage	0		0		0		0	0		0		0	0		
	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?											T				

APPENDIX 4

CHECKLIST - RANKING CRITERIA - SURVEY - LPG CARRIER

(PMC-09)

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		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARF	RIEF	۲ - V	ERS	SION	N 20	23									
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	DOC. & IMPI. NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	1000	GENERAL																
	1200	Enclosed Space Entry & Hot Work			0		0	•	0	0		0						
	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
	1200.8	Are all personnel entering an enclosed space provided with a personal gas detector which can measure oxygen, flammable gases or vapours (% of LFL), carbon monoxide and hydrogen sulphide?															0	10
	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
	1200.16	Is a ship specific list which identifies onboard enclosed spaces available onboard?															0	5
	1200.17	Is the crew aware of PPE appropriate for low temperatures and liquefied gases cargoes?															0	5
			┢		Minin	num	rankin	na sca		otal sco		ement 1	200 =	80			0	80
	1300	Compressor for the refilling of air cylinders for breathing apparatus or Alternative, Additional Green Award requirement								0								
	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
					NAL		umusle!			otal sco			200	40			0	20
					winin	num	rankir	ig scc	ore rec	juired t	or ele	ement 1	300 =	10				

									_										
		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARF	RIEI	R - '	VER	SIC)N 2	023										
Revision Code	Norm item	RANKING Ship - LPG	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	RANKING SCORE	RANKING MAX. SCORE
	1400	Control of drugs & alcohol onboard / Medical examination	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
					la er					otal sc								0	45
	1500	Emergency Response System	0		Min		rank	ang sa	core rec	quired	tor e	eleme	nt 14	00 = 3	50				
	1500.4	Is the vessel in receipt of evaluation reports of the annual ERS drill(s) between company, (class) and vessel?			+		•					•						0	5
	1500.4	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?								1								0	15
		To an armon arm portation on sound minor monados 2 to procedure.							Т	otal sc	ore	<u> </u>			!_			0	30
					Min	imum	rank	cing so	ore rec	uired	for e	leme	nt 15	00 = 1	5				
	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
,			,,,,,,,,,,,		Øla					otal sc				10 -				0	10
					Min	imum	rank	ting st	core rec	quired	tor e	leme	nt 15	10 = 0)				

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARF	RIEF	2 - V	ER:	SIO	N 20	23									
Revision Code	Norm item	RANKING Ship - LPG	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 RANKING SCORE	RANKING MAX. SCORE
	1600	Computer Systems, Networks, Data Security and Training. GA requirement	0							0								
	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
					Mini	mum	ranki	na sc	To ore req	otal sco		omon	+ 1600	1 - 30			0	60
	1610	Cyber Risk Management				- I	Taliki	iig sc	ore req	l l	or en	cincin	1000	7 = 30				
	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
					Balley !:		nami-t-			tal sco			4 4044	2 45			0	35
					WIINII	mum	rankii	ng sc	ore req	juired f	ror el	emen	it 161(J = 15				

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARI	RIEI	R - \	VER	SIC)N 2	023										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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
					la es					otal s		-1			15			0	50
	1710	Underwater Noise and Vibration Management			IVIIN	irnum	rank	ung s	core re	quire	u tor e	ereme	ent 1/	υυ = 1	13				
	1710.1	•																0	5
	-	Were any measures implemented periodically to reduce cavitation from propeller?	1		-							1			-			0	5
	1710.4	Does the ship opt for re-routing or slow steaming where possible and practicable to protect whale sensitive areas?	┢						-	otal s	core	<u> </u>					1	0	10
					Min	imum	rank	ing s	core re				ent 17	'10 = 0	0				10

		CHECKLIS	T - RANKING CRITERIA - SHIP S	URVEY - LPG CA	\RR	IER	2 - V	'ER	SION	202	3									
Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG		MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl. NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	1800	Social Dimension / Sustainability																		
		A. Good Health & Well-Being																		
	1800.1	Does the vessel have an ITF or similar agreement	n place?																0	10
	1800.3	Is an electronic device available on board specifica company for seeking medical advice?	lly to access digital platform (web or app) sul	oscribed by the															0	5
	1800.4	Has the shipboard staff been familiarized with platf networks to tackle mental health issues?	orms (online/offline) providing access to emo	tional support															0	5
	1800.5	Do all shipboard personnel have access to the inte	net at all times?																0	5
		B. Reduced Inequalities / Equal Opportunities /	Diversity																	
		B.1 General					_										-			
	1800.7	Have all ship board personnel been made aware or discrimination?	confidential reporting procedures to report h	arassment &															0	5
	1800.8	Have steps been taken to create awareness amon- policies focusing on subjects such as equal opports harassment, etc.?																	0	5
		B.2 Gender-specific									-		<u>-</u>					-		
	1800.10	Does the vessel have women seafarer(s) working e	either as officers or ratings?						-										0	10
	1800.11	Is the ship equipped with the following specific facil feminine hygiene items (in bonded stores) & separate washrooms with sanitary facilities suitable sized (gender specific) safety and protect access to medical supplies without having to con	arate disposal facilities tive clothing																0	5
												al scor				- 10			0	50
							Mini	mum	ranking	score	requ	ired fo	r elem	ent 1	1800 =	10				

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	IEF	۲ - V	/ER	SION	1 202	23										
Revision Code	Norm item	RANKING Ship - LPG	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	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	2000	NAVIGATION / BRIDGE OPERATIONS																	
	2100	Navigation	0		0		0												
	2100.3	Does the voyage or passage plan include contingency planning?																0	10
	2100.6	Is the vessel automatically supplied with new hydrographic publications?																0	10
	2100.7	Is the vessel electronically updated for hydrographic publications? (eg. Temporary and Preliminary NtM)																0	10
	2100.8	Is navigational equipment included in the electronic Planned Maintenance System?												<u></u>				0	10
	2100.9	Are masters entitled to use non-compulsory pilot services? (must be stated in a company procedure)												<u></u>				0	20
	2100.13	Is the vessel using weather routing services while on long haul voyage?												<u> </u>				0	10
	2100.18	Is the vessel enrolled in a meteorological & oceanographic service in a form of a software application?												<u></u>				0	10
	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?																0	5
	2100.15	Is the vessel equipped with the multi constellation GNSS receiver?												<u></u>				0	10
	2100.16	Is the vessel equipped with the eLoran receiver?												<u> </u>				0	10
	2100.17	Is the position for all stages of voyage compared with a different method of positioning than GPS?																0	20
					Mini	mum	ronkin	~ ~~~		tal sco		lomor	ot 24	00 = 40				0	120
	2111	Electronic chart display & information systems / ECDIS			IVIIIIII	IIIuIII	Talikili	y scor	erequ	uirea i	ioi e	lemer	11 21	JU = 40					
	2111	Applicable to ships for which carriage of ECDIS is compulsory																	
	2111.4	Is ECDIS hardware maintained and software updated?			I	I		T		I	I		I		T			0	5
	2111.5	Is ECDIS reliable in all training and software updated? 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)?																0	5
	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?																0	15
	2111.7	Have all the officers completed structured ECDIS training(s) on top of the generic training (besides the familiarization onboard in R2111.6)?																0	5
	2111.10	Does the voyage planning include checking if all needed charts are up-to-date (latest edition official chart updated an corrected to the latest available updates and NtM)?																0	5
	2111.11	Does the ECDIS procedure suggest display settings (layers) of ECDIS for various navigation conditions (arrival / departure - coastal - deep sea)?																0	10
	2111.12	Does the vessel have a basic folio of paper charts (in case second ECDIS is a back up system)?	L															0	10
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		СН	ECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG	G CAR	RIE	R - \	/ER	SIO	N 20	23										
Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.		Doc. & Impl.	CATERING PERSONNEL	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	2120	Fuel Change Over / Ballast Water Exch	nange	0		0		0												
	2120.1	Does the voyage plan (checklist) include	when fuel change over should 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
						1					tal sc		_						0	20
						Min	ımum	rankı	ng sc	ore rec	uired	tor e	leme	nt 21	20 = 2	20		_		
	2200	Helicopter / Ship Operations						0	•	0										
	2200.1	Are crew members who are involved in he	elicopter/ship operations trained in standards and procedures?																0	10
	2200.2	Is an action plan in case of a helicopter a	ccident available?																0	10
											tal sc								0	20
						Min	imum	ranki	ng sc	ore rec	uired	for e	leme	nt 22	200 = 2	20				
	2300	Mooring Operations		0)	0			•	0										
	2300.1	Does the company give procedures/instru	uctions for mooring/unmooring operations?																0	10
	2300.2	Is new crew familiar with the operation an	d capabilities of the ship's mooring equipment?																0	10
	2300.3	Are specific mooring plans which have be	een used at certain terminals recorded?																0	20
	2300.4	Is a drawing of the mooring arrangement	readily available on the bridge?																0	10
											tal sc								0	50
						Min	imum	ranki	ng sc	ore req	uired	for e	leme	nt 23	300 = 3	30				

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARI	RIEF	R - \	/ER	SIO	N 20	23										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	Deck Kaling Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	3000	MACHINERY / ENGINE OPERATIONS																	
	3100	Bunker Operations					0			0		0		0					
	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
					Min	imum	ronk	na co	To ore req	otal sc		lomo	nt 240	00 – E0	1			0	50
	3101	Bunker Operations - LNG			IVIII	Imum	rank	ing sc	ore req	uirea	tor e	lemei	nt 310	JU = 3U					
	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
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		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG (CAR	RIE	R - \	VER	SIC)N 2	2023											
Revision Code	Norm item	RANKING Ship - LPG	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.	CATEDING DEBSONNEI	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
;	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	g																0	10
		B.3 Testing																		
:	3200.1	Is bunkered fuel oil <u>always</u> 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 <u>commingling procedure</u> 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
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					Min	imum	ı rank	king s	core	requi	ired fo	or ele	ment	320	00 = 40					

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	IEF	۲ - ۱	/ER	SIO	N 2	023										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl. NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	4000	CARGOES / CARGO OPERATIONS																	
	4100	LPG Carrier Cargo Operations & Additional Green Award requirements	0		0														
	4100.1	Is it company procedure that the ship shore safety checklist has to be used before loading/unloading operations?																0	10
	4100.4	Does the company give procedures/instructions in relation to the entire cargo operations?																0	10
	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
	4100.14	Are all ESD points tested on regular basis?																0	10
	4100.27	Is a pre-arrival checklist completed at least within 24 hours and sent to the office at least 12 hrs prior to arrival?																0	10
	4100.28	Does the vessel send a pre-loading / discharging (cargo) plan to the office?																0	10
	4100.29	Is an instruction (matrix) for tanks preparation for the next cargo posted in CCR?																0	10
	4100.30	Is a step-by-step procedure for the process of draining the loading lines and hoses before loading arms get disconnected available onboard?																0	10
	4100.31	Is a procedure of carrying incompatible cargoes posted in CCR? N/A for ships that are certified to carry one grade of cargo at a time?																0	10
	4100.32	Is a procedure for minimizing the vapor loss available onboard?																0	10
	4100.33	Is a leak test of the cargo arm/hose connection to the manifold conducted prior to commencing the cargo transfer?																0	10
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	4200	Ship to Ship Transfer Operations	0		O	mum	ranki	ng si	core re	quired	_	o	ent 41	00 = 9	,U				
	4200.1	Is a STS safety drill carried out not more than seven days preceding a STS transfer operation?			Ť													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
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	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
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		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARF	RIEF	? - V	ER:	SIO	N 20	23										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK KATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl. CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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
	4400.12	Is a procedure available for describing the process of delivering coolant ashore prior to the vessel going to dry-dock?																0	10
	4400.13	Is atmosphere of void spaces continuously monitored for gases with alarm in the cargo control room and on the bridge?																0	40
	4400.14	Has the inert-gas installation enough capacity to inert the void spaces as well?																0	30
	4400.20	Are venting mast risers for cargo tank venting systems provided with a fixed system for extinguishing a fire at the vent outlet? (Nitrogen or any other suitable medium)																0	10
	4400.21	Are air condition system intakes equipped with toxic gases detectors?																0	10
	4400.22	Is there a system in place for an efficient handling of non-condensable gases during reliquefaction process which prevents venting non-condensable gases with a high amount of hydrocarbons to the atmosphere?																0	10
	4400.23	Is the primary barrier of the tanks fully insulated?																0	10
	4400.24	Are cargo domes insulated?																0	10
										otal s								0	170
	1500					mum	ranki	ing sc	ore re	quire	d for e	lemer	nt 440	0 = 10	0			I	
	4500	Hull Stress Monitoring System	0		0														
	4500.1	Does the vessel have a hull stress monitoring system which provide real-time information with readouts both in the CCR and on the bridge?																0	20
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Revision Code	Norm item	GREN AWARD	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING		CATERING PERSONNEL	Doc. & Impl.	RANKING SCORE	RANKING MAX. SCORE
	5000	PREVENTION OF POLLUTION																	
	5100	Biofouling Management																	
	5100.5	Are there ship-specific procedures/instr ship's biofouling to minimize the transfe	ructions (according to IMO guidelines) for the control and management or of invasive aquatic species?															0	10
	5100.6	Does the ship undergo in-water inspect consultation with coatings manufacture	tions and proactive hull cleanings as per the frequency and timing defined and/or coatings consultant?	in														0	5
	5100.7		te data points that are pre-defined as indicators for reactive hull cleaning oring or other relevant datasets such as increased drag or increased frict															0	5
	5100.9	Is the vessel's hull coated with non-toxi	ic hard coating to mitigate bio-fouling?															0	10
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		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	RIEF	۲ - ۱	/ER	SIC	N 2	023											
Revision Code	Norm item	RANKING Ship - LPG	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.	CALEKING PERSONNEL Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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
М	5200.22	Are all recyclable material such as paper, plastic, metal (for example, tin cans), glass, bottles, crockery & similar refuse, 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?										Ī							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
М	5200.43	Is the crew <u>aware</u> that old ropes and mooring lines are forbidden to be dumped at sea and must 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
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	1				IVIII	ımum	rank	ung s	core i	requ	ired to	or el	emen	π 52	00 = 50	U				

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Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG	MACTED	MASTER	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5410	NOx Emissions				Ť					0									_
		A. Emission Monitoring																		
	5410.10	Does the ship use a continuous emission emissions?	monitoring system (in-situ or extractive) for monitoring and re	ecording NOx															0	10
		B. Emission Reduction																		
		For ships keel laid between 01-01-2000	and 31-12-2010 (Tier I mandatory ships)																	
	5410.11	Does the ship reach the NOx tier 2 limits	on the main engines?																0	10
	5410.12	Does the ship reach the NOx tier 2 limits	on the <u>auxiliary engines</u> ?																0	10
		For ships keel laid on / after 01-01-201	(5410.13 - 5410.18)																	
	5410.13	Does the ship reach NOx emissions 15%	below the tier 2 limits on their main engine?																0	5
	5410.15	ALTERNATIVE 1 to 5410.13 Does the ship reach NOx emissions 30%	below the tier 2 limits on their main engine?																0	10
	5410.17	ALTERNATIVE 2 to 5410.13 Does the ship reach NOx emissions 50%	below the tier 2 limits on their main engine?																0	15
	5410.14		below the tier 2 limits on their <u>auxiliary engine</u> ?																0	5
	5410.16		below the tier 2 limits on their auxiliary engine?																0	10
	5410.18	ALTERNATIVE 2 to 5410.14 Does the ship reach NOx emissions 50%	below the tier 2 limits on their auxiliary engine?																0	15
		For ALL ships (5410.19)																		
	5410.19	Do all the ship's engines (main and auxili zones (24 nm from the nearest land)?	ary) ALWAYS operate at NOx Tier 3 levels in all ports and co	ontiguous															0	30
		C. Additional Questions																		
		Exhaust Gas Recirculation (EGR)																		
	5410.22	off discharge water to the company?	results from the continuous monitoring of exhaust gas recirc are applicable to EGR bleed-off discharge water as well.	ulation bleed-															0	10
	5410.23	and communicated communication made 1. Heavy metals 2. Wash water additives.	n the EGR unit as bleed-off water collected for sampling period to the company for the below parameters? datory monitoring of pH, PAH, turbidity values set by IMO.	odically															0	15
	5410.24	Is appropriate PPE being used by the cre EGR?	w during the handling of caustic soda which is used as an ad	ditive for															0	5
		Selective Catalytic Reduction (SCR)					-								-		-		-	
	5410.26	Does the shipboard crew monitor the cata avoid ammonia slip?	alyst condition continuously to make sure injected urea is fully	utilized to															0	20
										T	otal so	core							0	140

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	۱RF	RIEF	? - V	ERS	1018	1 202	23										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Deck Rating	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5420	SOx Emissions								0									
		A. Emission Monitoring		•		•		•							•		•	•	
	5420.11	Does the ship use a continuous emission monitoring system (in-situ or extractive) for monitoring and recording SOx emissions?																0	10
		B. Emission Reduction																	
	5420.12	Main and auxiliary engines: Does the ship voluntarily burn low sulphur fuel (max. 0.10% sulphur) or use equivalent methodology during the ship's stay at every port? (If exhaust gas cleaning system is used, sulphur content is measured with SO2:CO2 ratio. Ratio of max 4.3 is equal to 0.10% sulphur content)																0	30
		C. Additional Questions			•	•		•							•		•	•	
		Exhaust Gas Cleaning System (EGCS)																	
	5420.13	Is the ship fitted with an EGC system which is tested, surveyed, certified and verified under the requirements of Scheme B* (continuous emission monitoring with parameter checks)? * Under scheme B, the SOx emissions compliance plan (SECP) should present how the continuous monitoring of ship exhaust gas emissions will demonstrate that the total SO2(ppm)/CO2(%) ratio is comparable to the requirements of 14.1 and/or 14.4 of MARPOL Annex 6. * The ship should be in possession of EGC technical manual, scheme B (ETM-B).																0	10
	5420.14	Does the ship communicate negative test results from the continuous monitoring of wash water discharge to the company? *The wash water discharge criteria have been set out in MEPC.259 (68).																0	10
	5420.15	Is the treated wash water discharged from the EGC unit collected for sampling periodically and communication made to the company for the below parameters? 1.Heavy metals 2.Wash water additives *Above two are on top of the mandatory monitoring of pH, PaH, turbidity values set by IMO.																0	15
	5420.18	Does the ship have an EGC unit that is capable of operating only in closed-loop mode?																0	10
	5420.17	ALTERNATIVE TO 5420.18 Does the ship have an EGC unit that is capable of operating both in open and closed-loop mode (hybrid)?																0	5
	5420.19	Is the EGC unit capable of operating in zero discharge mode*? *Applicable only for vessels fitted with EGCS capable of operating in closed-loop mode.																0	15
	5420.20	Is appropriate PPE being used by the crew during handling of caustic soda which is used as an additive for closed-loop scrubbers?																0	5
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		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARI	RIE	R -	VEI	RSI	ON 2	2023												
Revision Code	Norm item	RANKING Ship - LPG	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.	RANKING SCORE	RANKING MAX. SCORE	
	5421	Ships required to carry out Fuel Change Over to low sulphur Marine Diesel Oil or low sulphur Marine Gas O (low sulphur Distillates)	il								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	
					1					_	al sc			151					0	75	1
	5430	Particulate Metter (DM) Emissions	0		Mii	nimu	m rar	king	score	requ	uired 1	tor e	lemei	1t 54	21 =	55					
	5430.7	Particulate Matter (PM) Emissions Does the ship have a Diesel Particulate Filter (DPF) for both main and auxiliary engines?	•				+				•				H			+	0	10	4
	5430.7	Does the ship have a Diesel Oxidation Catalyst (DOC) for both main and auxiliary engines?													 	_	i	+	0	_	
	5430.9	Does the ship have an Electrostatic Precipitator (ESP) for both main and auxiliary engines?													 	_	i	+	0	-	_
	5450.9	Does the ship have an Electrostatic Fredipitator (ESF) for both main and auxiliary engines?	-						ı	Tot	al sc	ore			Щ.			Щ.	0		_
					Mii	nimu	m rar	king	score	requ	ired 1	for e	lemei	nt 54	130 =	0					
	5440	Greenhouse Gas (GHG) Emissions - CO ₂ Emissions									0										
		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)	d														<u></u>		0	10	
	5440.11	Applicable to ships contracted for building on or after 1st January 2013, or delivered on or after 1st July 2015: 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 (CO ₂ 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.	lf Y	res,	, chc	oose	fron	n bel	ow op	otion	ns an	nd fil	II-in s	supi	plem	ent (CO ₂ -	GloN	IEEP	tab	
		Measures related to Machinery																		_/	1
		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													1			- 1/	/		J

		CHEC	KLIST - RANKING CRITERIA - SHIP SURVEY - L	PG CA	RRIE	R - VEI	RSION	2023								
Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG		MASTER Doc. & Impl.	CHIEF OFFICER Doc. & Impl.	DECK OFFICER	DECK RATING	CHIEF ENGINEER	Doc. & Impl. ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	CATERING PERSONNEL	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
		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 be	low opti	ons						I	
		LNG (Liquefied Natural Gas)						1								
		LPG (Liquefied Petroleum Gas)							1							
		GTL (Gas to liquid fuel)														/
		Bio-diesel													/	,
		Bio-LNG (Bio-methane)													/	
		Methanol													/	
		Ethanol														
		Dimethyl Ether												7	/	
		Other: *fill during survey*												\Box /		
			l	If Other=				•		-			•	/		
	5440.19	Auxiliary engines: Does the ship burn low carbon fuels such as:													0	15
		Low carbon fuels			If YES,	choose	from be	low opti	ons							
		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*												_ /		
			ŀ	If Other=										1/		

		СНІ	ECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG	G CARR	IER	- VE	RSI	ON :	2023	3										
Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG	MASTER	Doc. & Impl.	JER.	Deck OFFICER		DECK RATING		CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl. CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
		Long term goals (CO ₂ neutral operation	through zero carbon fuels)											-						
	5440.20	Main engines:																	0	25
	0	Does the ship use zero carbon fuels such	as:	17.77																
		Zero carbon fuels		IT YE	-S, C	hoos	e tror	n bei	ow o _l	ption	าร	- 1		-1		1		ı		
		Anhydrous Ammonia														-				
		Hydrogen														-				/
		Fuel Cells (Powered by ammonia or hydro Batteries	genij													-				<i>'</i>
		Nuclear																		
		Other: *fill during survey*														-		/	/	
		Other. Illi during survey	If C	ther=																
	5440.21	Auxiliary engines: Does the ship use zero carbon fuels such		74101-															0	25
		Zero carbon fuels		If YE	S, c	hoos	e fror	n bel	ow o	ption	าร					- 1				l
		Anhydrous Ammonia																		
		Hydrogen																İ		
		Fuel Cells (Powered by ammonia or hydro	gen)															İ	/	/
		Batteries																İ		
		Nuclear																Ι,		
		Other: *fill during survey*																/		
			If C	ther=														<u>/</u> .	_	
	5440.22	Does the ship use renewable energy source	ces for energy production such as:																0	25
		Renewable Energy source		If YE	ES, c	hoos	e fror	n bel	ow o	ptior	าร	_		_						
		Wind: *fill during survey*																		
		Solar																	,	/
		Other: *fill during survey*																		
				Vind=														/	/	
			If O	ther=														/_		
		C. Additional Questions							1											
	5440.23	Have shipboard personnel received trainin board?	ng for energy efficiency measures and related monitoring systems on																0	10
					_	Minim		nkine	coors		al sco		omo:	4 E 4	40 - 41	-			0	155

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	IFF	2 - V	/ER	SION	1 201	23										
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Joc. & Impl.	CHIEF OFFICER		ER	DECK RATING		CHIEF ENGINEER	Joc. & Impl.	ENGINEER OFFICER	Joc. & Impl.	ENGINEER RATING	Joc. & Impl.	CATERING PERSONNEL	NOT APPLICABLE	SANKING SCORE	RANKING MAX. SCORE
	5441	Greenhouse Gas (GHG) Emissions - Methane (CH ₄) Emissions - Main Propulsion			Ū					Ĭ								_	
		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
					Mini	mum	rankin	a eco		otal so		lomo	nt 5/	141 = 0				0	35
	5460	Environmental Ship Index (ESI)					ankin	9 300	10100	0	101	l	JIE 54	1					
	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?	1															0	20
	5460.4	Does the ship participate in the Environmental Ship Index (ESI) and are ESI points above 50?																0	20
										otal so		_						0	60
	5500	Courses Monament			Mini	mum i	rankin	g sco	re rec	quired	l for e	eleme	ent 54	160 = 0) 				
	5500	Sewage Management Sewage Treatment Plant																	—
	5500.1	Is the sewage treatment plant which uses minimal or no harmful chemicals?	₩											I				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?								T								0	10
	5500.8	Is the sewage treatment plant regularly checked and maintained as per manufacturer's guidelines?																0	5
N	5500.10	Alternative for 5500.1, 5500.2, 5500.3 & 5500.8 (applicable ONLY for short-haul vessels) Does the ship deliver all its sewage / sewage sludge (regardless of treated or untreated) to port reception facilities (where available)?																0	35
		For all ships: Sewage Holding Tank				•													
	5500.7	Is the sewage holding tank regularly checked and maintained?																0	20
					NATION !		en a lel c			otal so		law-	F	-00 0	10			0	55
					Mini	mum i	rankin	g sco				eleme	nt 55	500 = 2	20				_

CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CARRIER - VERSION 2023																			
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	Doc. & Impl.	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	KANKING SCORE	RANKING MAX. SCORE
	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?																	10
				Total score Minimum ranking score required for element 5510 = 0								0	25						
	5700	Ballast Water Management	0		0		o												
		For ships required to follow D-1 standard (as per International Ballast Water Management Certificate (IBWMC))																	
	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?									I							0	5
	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))																	
	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
	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
	5700.13	Does relevant shipboard personnel make use of suitable personal protective equipment (PPE) for handling chemicals used to operate BWTS?																0	10
	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
	5700.15	Is the relevant crew familiarized with the operation of the BWTS installed on board?																0	10
		For all ships				1		1			-				1				
	5700.7	Are sediment volumes monitored & recorded ?									\perp				1			0	10
	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) ?								-1									10
			\vdash	Total score 0 Minimum ranking score required for element 5700 = 50									U	85					
	5800	Accidental Bunker Oil Pollution Prevention Measures (overflow prevention systems)								0									
	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?																	5
			_		Minin	num ra	nking	score	_	al scor		ement	580	0 = 5				0	30
					on the	unii i c	Killig	SCOILE	. oqu	64 10		oment.	. 500	J = J					

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	RIEF	₹ - V	ERS	SION	1 202	23											
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	DOC. & IMPI. DECK RATING	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5801	Protective location of fuel and lubrication oil tanks								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?														1			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
									То	tal sc	ore					_			0	100
					Minir	num	rankir	g sco	re req	uired	for e	lemen	t 58	01 = 2	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 air type or void space seal?																	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
					Minir	num	rankir	a sco		tal sc		lemen	+ 58	10 -	15	—			0	60
	5811	Mooring wire lubrication					dinti	3 3001	104	o		0	50	. .						
	5811.1	Does the vessel use a mooring wire lubricant / grease that is certified according to the EEL?															7		0	20
		2000 and 10000. Soo a moving three administry groups that to continue according to the EEE:			1	1_			То	tal sc	ore								0	20
					Minir	num	rankir	g scor	re req	_	for e	lemen	t 58	11 = (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)?																J	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
					1					tal sc				_				П	0	55
					Minir	num	rankin	g scor	re req	uired	tor e	lemen	ıt 58	12 = (0					

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ARR	RIEF	₹ - \	/ER	SIO	N 20	23											
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE RANKING SCORE	RANKING MAX. SCORE	
	5820	Management of bilge water and sludge handling onboard			0		0		0	0		0								Ī
	5820.3	Are engine room personnel familiarized with on board sludge and bilge water management procedures?																0	10	1
	5820.4	Are engine room personnel familiar with the system layout, drawings and manuals?																0	5	
										otal s								0	15	
	E004	Outflitting of hiller mater and an			Mini	mum	ranki O		ore re	quired	l for e	eleme	ent 58	320 = 1	15					-
	5821	Outfitting of bilge water system			U	·	U		U	U		U	·							4
	-	A. Clean Drains (Drains that are <u>normally not</u> contaminated by oil)			1		1	- 1		1		1		ı	1					1
	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						•												1
	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	1
		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	Atternative 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 hridge)?																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	
N	5821.19	Does the ship have in operation a Class-approved equipment that ensures that the oil content of the bilge water effluent without dilution does not exceed 5 parts per million?																0	10	
		5821.9 is an alternative to 5821.1 - 5821.19 (all the above)																_	-	
	5821.9	Is all the bilge water from machinery spaces always delivered to reception facilities?																0	80	
					lace :					otal s								0	80]
					Mini	mum	ı ranki	ng sc	ore re	quired	tor e	ereme	ent 58	521 = 2	20					

GA COU		Stilp Haltie.																, 0, 0,	nip Su	voy.
		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ARF	RIEF	۲ - ۱	VER	RSIC	ON 2	2023											
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	Doc. & Impl.	CHIEF ENGINEER	Doc. & Impl.	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	5822	Outfitting of sludge handling system			0		0		0		0	•)							
	5822.1	Is a sludge collecting pump installed (with the sole purpose of collecting the sludge from different ER tanks to the Oi Residue (Sludge) Tank)?	I																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																	0	5
	5822.6	Alternative to 5822.8 - 5822.10 Is all the ship sludge always delivered to reception facilities?																	0	20
					India.			lelman e			l scor red fo			5000	40				0	30
	5900	Ship Recycling - Inventory of Hazardous Materials	0		MIN		rani	king s	score		rea to		nent :	0022 =	: 10					
	5900.10	Does the vessel have an "Inventory of Hazardous Materials" (Part I completed)?															\dashv	\dashv	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
N	5900.14	ls a software tool used to support the IHM maintenance process, for example, for the collection of Material Declarations (MDs) & SDoCs for all purchased items that fall into the scope of IHM Part I?																	0	20
					India			lelman e			l scor red fo			5000	40				0	130
					IMILL	mult	rani	king s	score	requi	rea 10	ı eler	nent :	39UU =	4 0					

		CHECKLIST - RANKING O	RITERIA - SHIP SURVEY - LPG C	ARR	IER	۲ - ۱	/ER	SIC)N 2	2023											
Revision Code	Norm item		IKING - LPG	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	RANKING SCORE	RANKING MAX. SCORE
	6000	MAINTENANCE / SURVEYS																			
	6100	Programme of Inspections		0							0										
	6100.1	Does the ship have an internal technical inspection programme?																		0	10
	6100.2	Are relevant previous survey and internal technical inspection reports a	railable on board?																	0	10
	6100.3	Does the ship have a repair history?																		0	10
ŀ	6100.4	Does the company issue procedures/instructions for hull / ship's construby the ship's personnel?	ction condition inspections to be carried out																	0	20
	6100.8	Is there a company procedure available for the assessment of cold-spo	s?																	0	10
						India:					Total s		-1	4 C4	00	60				0	60
	6110	Critical and Stand-by Equipment		0		O	mum	o	ang s	score	equire	d for	eleme	ent 61	00 =	60					
	6110.5	Is a Computer Based Program installed to register failures, break down	and near misses in order to have a																	0	10
	6110.7	constant event report on the systems? Is a Computer Based Program installed for spare parts management of	critical aguinment and stand, by aguinment?	,																0	10
	6110.8	Is a safety stock available for critical equipment and stand-by equipment									-									0	10
	0110.0	is a safety stook available for childar equipment and stand by equipmen	т.			<u> </u>					Total :	score	<u> </u>							0	30
						Mini	mum	rank	ing s	score	equire	d for	eleme	ent 61	10 =	10					
	6200	Mooring Equipment		0		0				0											
	6200.1	Are winch brake tests carried out and recorded at least once a year or a	fter an excessive load?																	0	10
	6200.2	Is a winch brake test kit on board?									_									0	5
	6200.3	Is an overview available with all details of mooring wires / fibre ropes, w maintenance, tests etc.?	nches, inspections,																	0	10
(6200.4	Is the ship provided with information on the design of the mooring syste be experienced under particular conditions and to illustrate those situati likely to be reached)		o																0	10
	6200.5	Are inspection, maintenance and discard criteria for mooring wires and by a competent person? (time interval for inspection should be in the PI										_								0	10
	6200.8	Do these criteria take manufacturer's recommendations into account ?																		0	10
	6200.9	Does an additional examination take place after unusual events, such a heat exposure, loading/discharge at swell ports, etc?	s long periods of inactivity, excessive loads,																	0	5
	6200.10	Are internal inspections for wires + fibre ropes carried out & do these in recommendations into account?	spections take manufacturer's																	0	10
		Are the lubricants & cleaning products compatible with the wire and app	roved by the wire manufacturer?																	0	5
	6200.11	r are the restriction of extensions between the most are the		-		1				1			1								
	6200.11 6200.6	Is a log for "workingdays" of mooring wires and tails / fibre ropes mainta evaluation of wire/rope performance)	ined? (to predict the point of discard & for																	0	10
ı		Is a log for "workingdays" of mooring wires and tails / fibre ropes mainta	ined? (to predict the point of discard & for										-							0	10
1	6200.6	Is a log for "workingdays" of mooring wires and tails / fibre ropes mainta evaluation of wire/rope performance)		L															+		

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG CA	ΔRP	IF	D - 1	/FP	SIO	N 20	123										
	1	CHECKLIST - KANKING CKITEKIA - SHIP SUKVET - LPG CA	T	VIE!	\ - \	ER	310	14 20	123	T	T								
Revision Code	Norm item	RANKING Ship - LPG	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	RANKING SCORE	RANKING MAX. SCORE
	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
					laar -					otal sc		_						0	70
	6400	Out distingt A	0		Mini	mum	ranki	ing so	ore rec	uirea	tor e	eleme	ent 63	300 = 4	40				
	6400	Condition Assessment Program, Maintenance Additional Green Award requirements Does the ship hold a CAP rating for Hull with Rating / Grade 2 as a minimum?	•		-					•									
	6400.1	(When the vessel reaches 15 years of age, or by the end of the 3rd special survey, 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 Machinery with Rating / Grade 2 as a minimum? (When the vessel reaches 15 years of age, or by the end of the 3rd special survey, 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
			\vdash		Mini	mum	ranki	ina er	ore rec	otal sc		lome	nt 64	INN - 4	60			0	120
	6500	Certificates for Cargo Gear	0		0	- I	- anki	9 30	216 180	o	.0. 6		J4						
	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)			1													0	10
	6500.3	Is a certificate of test and thorough examination of loose gear issued? (CG3)			1													0	10
	6500.4	Is a certificate of test and thorough examination of wire rope issued? (CG4)			1													0	10
		The state of the s							Тс	otal sc	ore							0	40
					Mini	mum	ranki	ing so	ore rec	uired	for e	eleme	ent 65	500 = 4	40				-

	CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG	CAR	RIE	R - '	VEF	RSIC	N 2	2023	3									
Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Joc. & Impl.	DECK OFFICER	Joc. & Impl.	DECK RATING	Joc. & Impl.	CHIEF ENGINEER	Joc. & Impl.	ENGINEER OFFICER	Joc. & Impl.	ENGINEER RATING Doc. & Impl.	CATERING PERSONNEL	Joc. & Impl.	ROLAPPLICABLE RANKING SCORE	RANKING MAX. SCORE
7000	CREW							. –										
7200	Extra personnel, Additional Green Award Requirement	0	1							0								
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
7200.5	Is there a gas engineer onboard?																0	10
7200.6	Is there an electrical officer onboard in addition to the engine officers required by the safe manning document?																0	10
				Mir	imur	n rani	ring (score		al sco		omon	+ 720	0 = 20			0	70
7300	Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses	0	r.	T		1	ung (1	Toqu		0.00	Cilicii	1	J = 20				
7300.1	Has the 2nd officer (deck) completed an approved Advanced training for Liquified gas tanker cargo operations? (a minimum, the program should comply with STCW 2010 including Manila amendments Reg V/1-2)																0	20
7300.2	Are all onboard personnel trained and qualified according to the approved Basic training for Liquified tanker cargo operations? (as STCW 2010 including Manila amendments Reg V/1-2) (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	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 1.35)																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 (IMC 1.22)?)															0	5
7300.19	Have all the engine officers completed engine room resource management training course?																0	5
7300.20	Alternative for 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
7300.11	Has the gas engineer completed the advanced training for liquified gas tanker cargo operations? (IMO 1.06)	-															0	10
7300.12	Have all the senior officers (Master, Chief Officer, Chief Engineer, 2nd Engineer and Gas Engineer) completed th Liquid Cargo Operations Simulator (LICOS) course as recommended by SIGTTO for senior officers and relevant cargo containment type?																0	10
7300.13	Have all the junior officers (2nd Officer, 3rd Officer, 3rd Engineer and 4th Engineer) completed the Liquid Cargo Operations Simulator (LICOS) course as recommended by SIGTTO for junior officers and relevant to cargo containment type?																0	20
7300.16	Has the master completed a fire fighting training that specifically addresses chemical fires ?																0	15
7300.17	Have all the officers completed Security Awareness Training?																0	5
										al sco							0	14

		CHECKLIST - RANKING CRITERIA - SHIP SURVEY - LPG C	ΔRR	PIFF	S - /	/FR	SIO	N 2	0023											,
Revision Code	Norm item	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER		9	Joc. & Impl.	CHIEF ENGINEER	Joc. & Impl.	ENGINEER OFFICER	Joc. & Impl.	ENGINEER RATING	Joc. & Impl.	CATERING PERSONNEL	NOT APPLICABLE	RANKING SCORE	SANKING MAX. SCORE
	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
					Mini	mum	rank	na e	coro		al sco		lomor	st 7/	00 = 5	50			0	70
	7500	Safe Manning and Fatigue Management	0		IVIIII	IIIuiii	Talik	ng s	COIE	requ	illeu i	or e	lemen	11.74	00 = 0	JU				
		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										•				•		•	•	•
	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
	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
	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			-							•				-		-	-	-
		Describe the skin have a great domain which conversely an able to an artist a design at all and a state of the skin and a stat	1																0	5
	7500.7	Does the ship have a procedure 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> ?																	"	ľ
	7500.7										al sco								0	5

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		CI	HECKLIST - RANKING CRITERIA - SHIP SURVEY - L	PG CAR	RIE	R - \	VER	SIO	N 20)23											
Revision Code	Norm item	GREEN AWARD	RANKING Ship - LPG	MASTER	Doc. & Impl.	CHIEF OFFICER	Doc. & Impl.	DECK OFFICER	Doc. & Impl.	DECK RATING	CHIEF ENGINEER	Doc. & Impl.	ENGINEER OFFICER	Doc. & Impl.	ENGINEER RATING	Doc. & Impl.	CATERING PERSONNEL	Doc. & Impl.	NOT APPLICABLE	RANKING SCORE	RANKING MAX. SCORE
	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 management and people development)?	of ISO 10015 (quality management – guidelines for competence																	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 systems)?	of ISO 22301 (societal security – business continuity management																	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
						Min	imum	rank	ina er		otal s		alamo	ant 0/	121 –	0				0	80
						MINIT	mam	ratik	ing st	ore re	quire	u ioi e	CICILIE	511L 3 4	121=	U					

TOTAL SCORE REVIEW SHIP SURVEY - LPG CARRIER WAXIMUM RANKING SCORE L200 Enclosed Space Entry & Hot Work TOTAL SCORE REVIEW SOURCE REVIEW BENERAL 1200 Enclosed Space Entry & Hot Work TOTAL SCORE REVIEW SOURCE	ELEMENTS WITH NO MINIMUM SCORE
1200 Enclosed Space Entry & Hot Work 0 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 / Medical examination 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 20 20	
2200 Helicopter / Ship Operations 0 20 20	
2300 Mooring Operations 0 50 30	
3000 MACHINERY / ENGINE OPERATIONS	
3100 Bunker Operations 0 50 50	
3101 Bunker Operations - LNG 0 50 25	
3200 Fuel oil management 0 80 40	
4000 CARGOES / CARGO OPERATIONS	
4100 LPG Carrier Cargo Operations & Additional Green Award requirements 0 160 90	
4200 Ship to Ship Transfer Operations 0 30 30	
4400 Additional Green Award Requirements (tank alarms, coatings, etc.) 0 170 100	
4500 Hull Stress Monitoring System 0 20 0	
5000 PREVENTION OF POLLUTION	
5100 Biofouling Management 0 30 5	
5200 Waste Management / Garbage Handling Onboard 0 120 50	
5410 NOx Emissions 0 140 35	
5420 SOx Emissions 0 105 15	
Ships required to carry out Fuel Change Over to low sulphur Marine Diesel Oil or low sulphur Marine Gas Oil (low sulphur Distillates) 55 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 - LPG CARRIER - VERSION 202	3			
Norm item	TOTAL SCORE REVIEW SHIP SURVEY - LPG CARRIER	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	Protective location of fuel and lubrication oil tanks	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	80	20	
5822	Outfitting of sludge handling system	0	30	10	
5900	Ship Recycling - Inventory of Hazardous Materials	0	130	40	
6000	MAINTENANCE / SURVEYS				
6100	Programme of Inspections	0	60	60	
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	70	20	
7300	Training / Courses for Personnel, Additional Green Award Requirements & IMO Model Courses	0	140	60	
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	3510	1515	

LEGEND

LLGLI	שו
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 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".

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
Electricity generation
TIER
Questions applicable (from 5410.11 - 5410.18) NA

Questions applicable (from		NA NA		
For DIESEL-ELECTRIC & DUAL FUEL (LNG / LPG) data, use "OTHE	R ENGINE" mod	ules 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 Compliand	e		
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 Compliand	e		
ALIVILIARY ENGINE 4	1,		DDM	
AUXILIARY ENGINE 1	NA→	Tion 4	RPM	Tion 0
Applicable NOV principal limit (#/JANIb)		Tier 1	Tier 2	Tier 3
Applicable NOx emission limit (g/kWh)				
Engine's actual NOx emission value (g/kWh)		NA	NA	NA
Percentage reduction	GA Compliano		INA	INA
	C/ Compilario			
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 Compliand	e		
AUXILIARY ENGINE 3	NA→		RPM	
TOTAL LIGHT COME O	10.7	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 Compliand	e		
ALVI LADVENONE (1		BE:-	
AUXILIARY ENGINE 4	NA→		RPM	
		Tier 1	Tier 2	Tier 3
A F 11 NO F 1/ / /////				
Applicable NOx emission limit (g/kWh) Engine's actual NOx emission value (g/kWh) Percentage reduction		NA	NA	NA

CKL LPG / VERSION 2023 / 1.0 83 of 96

SUPPLEMENT TO 5410 - NOX EMISSIONS

DATA FROM "SUPPLEMENT TO <u>ENGINE</u> 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 DIESEL ENGINE Electricity generation TIER NA
Questions applicable (from 5410.11 - 5410.18) NA

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 Complian	се		
OTHER ENGINE	NA→		RPM	
	1017	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 Complian	се		
OTHER ENGINE	NA→		RPM	
	IIA 7	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 Complian	ce		

CKL LPG / VERSION 2023 / 1.0 84 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

ENERGY EFFICIENCY TECHNOLOGIES INFORMATION PORTAL

GA Code: **TECHNOLOGY GROUPS** Ship name:

IMO GLOMEEP Website 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 autotuning, 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

CKL LPG / VERSION 2023 / 1.0 85 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

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.

Υ?	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

CKL LPG / VERSION 2023 / 1.0 86 of 96

SUPPLEMENT TO 5440 GHG EMISSIONS - CO2

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)
	<u>Flettner rotors</u>	Use Flettner rotors to generate power from wind energy	Not mature	Dependent on trading area and sufficient free deck-surface
	<u>Kite</u>	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.

Υ?	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.

Proven, new or existing technology/principle, but with limited uptake across the Semi-mature

industry.

Not mature New unproven-, unproven existing- , or proven existing technology/principle but

with very few installations and little to no operational experience.

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

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CKL LPG / VERSION 2023 / 1.0 87 of 96

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

APPENDIX 5

CHECKLIST - VISUAL INSPECTION - SURVEY - LPG CARRIER (PMC-10)

		Green A	Award Visual Inspection - LPG Carrier	
Check Box	Norm item	GREEN AWARD	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	
		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		
		Overall tidyness of E.R. space	Unsecured and loose material, tools and E.R. spare-parts	
		General cleanlinesss of E.R.	Oil- & gas-free enviroment	
		Storage E.R. equipment	Equipment stored at designated places	
		Handling of general E.R. waste	General waste stored & handled properly	
		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	1
		Fuel lines H.P. & L.P.	H.P. pipes condition of protecting pipe/cover, L.P. pipes check leakage and heating tracings	
		Cleanliness of cylinder heads	Fuel oil, cooling water, lub. Oil and exhaust gas leaks	
		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	
		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		
		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	
		Boilers		
		Steam or Thermal oil		
		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	
		Boiler bilge / Save-all	Oil-, water-, corrosion- and dirt-free	

		Green	Award Visual Inspection - LPG Carrier	
Check Box	Norm item	GREEN AWARD	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		
		In port overboard valve sealed		
		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	
		Double bottom sounding pipes	Check functioning self closing valves	
		Piping Systems		
		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		
		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	
		Electrical		
		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.	
		Inert Gas Plant		
	8111.1	Inert Gas system fully operational		
		Condition of all instrumentation	Special O2 meter	
		Condition of all alarms and trips	High and low level alarms etc.	
		Sewage Plant		
	8112.1	Sewage Plant fully operational	Alarms, level switches etc.	
		Position of valves correct	Check if the by-pass valves are closed	
		Fire Pumps		
		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		
		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 - LPG Carrier	
Check Box	Norm item	GREEN AWARD	Inspection Focus	Remarks
		Machinery		
	8115	Quick Closing Valves		
	8115.1	Condition of closing valve station	Check for clear instructions	
		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		
		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		
		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	
		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 - LPG Carrier	
Check Box	Norm item	GREN AWARD	Inspection Focus	Remarks
	8200	Steering Gear		
	8207	Visibility of Rudder Angle Indicator		
		Rudder angle indicator present		
		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	
		Safety and protection measures fitted	Vessels > 10.000 GT should have railings around the steering gear and deck non-slip surface	
		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		
		Cargo pumps fitted with temperature trips		
	8302.6	Cargo pumps with sensors for vibration monitoring bearings Is all equipment combined working	Malfunationing often indicator	
-			Malfunctioning often indicator	
		Functioning Pump Controls/Turbine Controls		
	8303.1	Pump controls functioning	Speed sensor, suction meter, pressure meter, vibriation meter	
		Pump alarms functioning Turbine trips functioning	Temp. of bearings and casing	
		Regular tests conducted	Overspeed, backpressure, lub.oil pressure and bearing temp.	
		Tests recorded		
		Gauges and Tachometers		
		Cargo / Ballast pump gauges operational		
	8304.1	Cargo / Ballast pump tachometers operational		
		Engine / Pump Room Seals		
		Condition seals Cargo/Ballast pumps pumproom/ E.R.	Check deck penetration, oil level in deck seals	
\vdash	8305.7	Condition seals Cargo/Ballast pumps pumproom/ E.K. Condition seals Cargo/Ballast pumps / pump room	Check for leakage	
		Cargo Control Room Communications	Official to the total to	
		-	Communication between Corea Control Doom / Duran Doom / Corea Duran Turkings / 5 D. 1/4-1	
\vdash		Communication satisfactory Communication operational	Communication between Cargo Control Room / Pump Room / Cargo Pump Turbines (E.R. side)	
	0300.2	Communication operational		

	Green Award Visual Inspection - LPG Carrier			
Check Box	Norm item	GREEN AWARD	Inspection Focus	Remarks
	8300	Cargo / Ballast System		
	8307	Meters / Displays Inside Pump Room Class		
		Suction and discharge pressure meters	Check for good working	
		Continuous monitoring of hydrocarbon gases	Check test dates	
		Thermometers of bearings / pump casing	Check for good working	
		Bilge alarms	Check for high level and high-high level	
		Electrical Equipment		
		Equipment installed explosion-proof	Light,control equipment, switches etc.	
		Ventilation and lighting interlocked	Ventialtion starts when lights switched on, failure of ventilation seperate of light-functioning	
		Condition of electrical safety barriers		
		Oil Discharge Monitoring Equipment		
		Oil discharge monitor	Check operational condition / calibration	
		Recorder	Check recent history output	
		Vapour system		
		Vapour lines and manifolds		
	8400	Structural		
		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	
		State Authority reports	Survey reports, recommendations	
		Company Reports	Inspection reports, repair, maintenance and dry-dock reports by ship's staff and superintendents	
		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	
		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	
		Ballast Tanks		
		Structural integrity	Deformations, cracks, leakages of bulkheads, stringers, webs, girders	
		Corrosion condition	Corrosion and / or corrosion pattern of structural design	
		Corrosion protection system	Condition of coating and / or sacrificial anodes	
<u> </u>		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 - LPG Carrier			
Check Box	Norm item	GREEN AWARD	Inspection Focus	Remarks
		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	
		Corrosion protection system	Condition of coating and / or sacrificial anodes	
		Pipelines and valves	Condition pipes, supports, coupling, flanges, deformations and leakages	
		Miscellaneous equipment	Condition emergency pumps / controls, access facilities	
	8407	Main Deck & Fittings		
H	8407.1	Deck plating - Deformations	May indicate problems from underneath, stiffeners or underneath deck-plating	
		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	
		Deck plating - Corrosion	If substantial indicate pattern, density and locations	
		Tank entrances and deck openings	Condition check of covers and closing devices	
		Pipeline couplings, flanges, branches and supports	Condition check, deformation, cracks, corrosion, thightness	
	8407.7	Ventilation - pipes / ducts	Condition check of covers, closing devices, flame screens, floating locks	
		Inert Gas valves, non return valves, void spaces P/V valves, pressure relief valves, 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		
		Emergency stop at cargo manifold	Condition check	
		Permanent drip-trays on open deck where spills may occur		
		Are these drip-trays clean and properly closed		
		Distance presentation flanges - ship's side > 4,6 mtr		
		Manifold spill-tank length extending beyond bunker		
igwdown		connection		
		Manifold spill-tank 1,8 mtr. in width and reaching 1,2 mtr beyond		
\vdash		reducer presentation flanges Manifold spill-tank minimum depth of 300 mm		
\vdash				
\vdash		Suitable means provided for draining manifold spill-tank		
\mathbf{H}		Manifold spill-tank clean and empty Manifold spill-tank well maintained		
\vdash	8407.20	Continuous deckedge fishplate height / deck scupper closing		
		devices		
\vdash		Emergency pump fixed or portable		1
	8407.23	Dropvalves from spill-tanks to sloptanks on deck		1
	8407.24	Arrangements for continuous draining of rain water		
H	8407.25	Hose handling, stores handling	Check certificates and working order	

	Green Award Visual Inspection - LPG Carrier					
Check Box	Norm item	GREEN AWARD	Inspection Focus	Remarks		
		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			
	8410	Accomodation & Machinery Spaces				
	8410.1	Structural integrity	General condition, damages & defects			
	8410.2	Doors, windows, ventilation ducts, closing devices	Condition check and water tightness			
		Stairs and platforms	Condition check, corrosion / deformations			
	8410.4	Pipelines, valves, couplings, overboard connection	Condition check			
		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	Anchors, 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				
		Condition emergency towing equipment aft ship.	Check wires etc.			
	8413.2	Condition emergency towing equipment fore ship				

	Green Award Visual Inspection - LPG Carrier				
Check Box	Norm item	GREEN AWARD	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		
		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		
		Fire fighting			
		CO2 / Dry powder system	Pressure gauges / indicators on bottles / pipelines / nozzles		
		Foamtank	Content / Filling		
		Foam monitors on deck	Check condition and working order		
		Fire control plans	Check available and clearly visible		
		Portable fire extinguishers	Check ready for use, last check date		
		Fireman's outfit	Check ready for use, easy accessable		
		Breathing Apparatus charging compressor	Check ready for use, easy accessable		
		International Ship/Shore Fire connection	Check available both sides		
		Fire alarm system and detectors	Check test records, condition in accommodation, ER and boiler room		
		Fire flaps and vent stops	Check condition on deck, accommodation, ER and boiler room and clearly marked		
		Fire lines	Check condition on deck, accommodation, ER and boiler room		
		Fire hoses	Check condition on deck, accommodation, ER and boiler room		
		Fire system for scavenging air receiver and boiler front	Check condition and working order separate fire fighting system		
		Escape routes			
		Free access	Check free access without obstructions		
		Indicators	Check clear markers / positioning		
	8504.3	Emergency lighting	Check clear markers / positioning		
		Marine Spill Response Equipment			
		Marine Pollution Emergency Plan	Check availability		
	8505.2	Emergency equipment	Check content and working order		