

Report of the 2018 Concentrated Inspection Campaign (CIC) on MARPOL Annex VI



November, 2019

Executive Summary

Member Authorities of Tokyo MOU carried out a CIC on MARPOL Annex VI jointly with Paris MoU between 1 September 2018 and 30 November 2018. During the campaign member Authorities assessed shipboard compliance with the MARPOL Annex VI requirements concerning air pollution. This report documents the results of the campaign by the member Authorities of the Tokyo MOU. Results of Paris MoU Authorities are reported separately.

The objective of the CIC was to check the level of compliance and create awareness with the requirements of MARPOL Annex VI. Equipment and compliance under MARPOL Annex VI has always been considered an inspection item for PSC inspections.

During the CIC period a total of 8,270 inspections were carried out involving 7,657 ships. 6,604 of those inspections were performed using the CIC questionnaire. During the CIC period, 198 ships (2.58%) were detained; however the CIC questionnaire was used in inspections of only 140 of these detained ships. The data shows that the CIC-topic detention rate during CIC inspections was 0.07% (5 ships detained). 3.6% of the total detentions during the CIC period were related to deficiencies in relation to CIC topics. The overall number of CIC-topic related deficiencies was 889, which equates to 0.13 CIC deficiencies per inspection.

Ships of 82 flag States were inspected during the CIC. The flag State with the highest number of inspections was Panama with 1,817 (27.5%) inspections followed by Hong Kong (China) with 649 (9.8%) inspections. Liberia and Marshall Islands both had 620 (9.4%) inspections during the CIC. Five flag States received a single CIC-topic related detention: Liberia, Netherlands, Panama, Singapore and Vietnam.

The highest number of CIC inspections relating to ship type was 2,402 (36.4%) conducted on bulk carriers, followed by 1,234 (18.7%) conducted on general cargo/multi-purpose ships and 1,171 (17.7%) conducted on container ships. Gas carriers had the highest CIC-topic related detention rate (0.96%), followed by oil tankers (0.23%) and bulk carriers (0.08%).

The Report concludes that the CIC indicates that the industry has achieved a good level of compliance with the specific provisions inspected during the CIC of MARPOL Annex VI requirements.

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1 Introduction

1.1 Purpose of this Report

The purpose of this report is to present the results of the Concentrated Inspection Campaign (CIC) on MARPOL Annex VI that was conducted by member Authorities of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU; hereinafter referred to "TMOU") between 1 September 2018 and 30 November 2018.

1.2 Objective of the CIC

The specific objectives of the CIC were:

1. Establish the level of compliance with the requirements of MARPOL Annex VI within the TMOU region;
2. Create awareness amongst ship crews and ship owners with regards to the importance of compliance with the provisions of MARPOL Annex VI and the prevention of air pollution;
3. Send a signal to the industry that prevention of air pollution and enforcement of compliance is high on the agenda of TMOU member states;
4. Emphasize the responsibility of the PSC regime concerning harmonized enforcement of compliance with the requirements of MARPOL Annex VI, thus improving the level of compliance and ensuring a level playing field.

1.3 Scope of the CIC

The scope of the CIC included all ships targeted for PSC inspection within the TMOU region between 1 September 2018 and 30 November 2018.

1.4 General Remarks

1.4.1 For the purpose of this report a detention is an inspection containing at least one deficiency that is considered grounds for detention;

1.4.2 The tables do not take into account inspections where the CIC questionnaire was not recorded, with the exception of Table 2.

2 Summary, Conclusions and Recommendations

2.1 Summary

2.1.1 The TMOU carried out a CIC on MARPOL Annex VI jointly with Paris MOU between 1 September 2018 and 30 November 2018. During the campaign member States assessed shipboard compliance with the MARPOL Annex VI requirements concerning air pollution. This report documents the results for the campaign.

2.1.2 During the CIC period a total of 8,270 inspections were carried out involving 7,657 ships. 6,604 of those inspections were performed using the CIC questionnaire. During the CIC period, 198 ships (2.58%) were detained; however the CIC questionnaire was used in inspections of only 140 of these detained ships. The data shows that the CIC-topic detention rate during CIC inspections was 0.07% (5 ships detained). 3.6% of the total detentions during the CIC period were related to deficiencies in relation to CIC topics. The overall number of CIC-topic related deficiencies was 889, which equates to 0.13 CIC deficiencies per inspection.

2.1.3 The most satisfactory result from the questionnaire was for Q2, which asked whether bunker delivery notes indicate fuel oils on board are not exceeding the maximum allowed sulphur limit, only one out of 6,556 applicable respondents answered no, with 99.98% compliance. Results of greater than 99% compliance were also recorded for Q3 do ships have a written fuel change-over procedure for compliance when entering SO_x emission control areas (99.38%), Q4 are alternative arrangements (e.g. scrubbers) installed on board approved by the flag State and Q9 are the crew familiar with essential shipboard procedures in the VOC Management Plan.

2.1.4 The least favourable result was for Q6, which queried whether ships with rechargeable systems containing ozone-depleting substances have the ozone-depleting substances record book maintained, with 121 (5.16%) 'NO' answers from 2,346 applicable respondents. The second least favourable result, in terms of percentage of 'NO' responses, was Q7, which queried whether an approved method is installed and confirmed by survey, with 63 (2.51%) 'NO' answers from 2,508 applicable respondents.

2.1.5 High Risk Ships (HRS) comprised the largest percentage of ships detained per CIC inspection (4.54%) and the largest CIC-topic related detention percentage per CIC inspection (0.20%). In comparison the Standard Risk Ship (SRS) detention percentage was considerably lower (1.87% and 0.04% respectively).

2.1.6 The highest number of CIC inspections relating to ship type was 2,402 (36.4%) conducted on bulk carriers, followed by 1,234 (18.7%) conducted on general cargo/multi-purpose ships and 1,171 (17.7%) conducted on container ships. Gas carriers had the highest CIC-topic related detention rate (0.96%), followed by oil tankers (0.23%) and bulk carriers (0.08%).

2.1.7 Ships of 82 flag States were inspected during the CIC. The flag State with the highest number of inspections was Panama with 1,817 (27.5%) inspections followed by Hong Kong (China) with 649 (9.8%) inspections. Liberia and Marshall Islands both had 620 (9.4%) inspections during the CIC. Five flag States received a single CIC-topic related detention: Liberia, Netherlands, Panama, Singapore and Vietnam.

2.1.8 The RO with the highest number of ships inspected was Nippon Kaiji Kyokai (NKK) with 2097 inspections, accounting for 31.75% of the total inspections. Bureau Veritas had the highest number of CIC-topic related detentions (two) and the highest CIC-topic related detention rate (0.03%). Lloyd's Register, Panama Maritime Documentation Services, and Vietnam register each had one detention.

2.1.9 Of the TMOU member States China (1,685) and Japan (1,495) conducted the most CIC inspections. China had the highest number of CIC-topic related detentions (four), the remaining detention was in Republic of Korea. China had the highest CIC-topic related detention rate (0.24%).

2.1.10 The CIC questionnaire statistics show that overall compliance with MARPOL ANNEX VI is high within the industry. The overall number of CIC-topic related deficiencies reported per inspection was 0.15.

2.1.11 TMOU members will continue to pay attention to MARPOL Annex VI, particularly with the revised sulphur limit coming into force from 1 January 2020.

2.2 Conclusions

The data from the CIC shows that implementation of the specific provisions of MARPOL Annex VI, addressed in the questionnaire, is generally very good.

2.3 Recommendations

The following recommendations are offered for consideration:

- 1) Member Authorities continue to focus on compliance with MARPOL Annex VI during PSC inspections noting the forthcoming implementation of the 2020 sulphur cap and the additional complexity that this will entail.
- 2) Particular attention should be given checking for compliance of the ozone depleting substances record book for applicable ships.

3 CIC Questionnaire Results

3.1 Analysis

3.1.1 Responses to CIC Questionnaire

Table 1 CIC Questionnaire results

QUESTION NUMBER	CIC ON SAFETY OF NAVIGATION, INCLUDING ECDIS	YES		NO		N/A		%NO	
		#	% ¹	#	% ¹	#	% ²	#	% ³
Q1	Are bunker delivery notes, with details of fuel oil for combustion purposes, kept available on board for the required period of 3 years?	6,427	98.20%	118	1.80%	59	0.89%	N/A	N/A
Q2*	Do bunker delivery notes indicate that fuel oils delivered and used on board is not exceeding the maximum allowed sulphur content, as appropriate?	6,555	99.98%	1	0.02%	48	0.73%	1	100%
Q3	Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.1% m/m in fuel oil while operating in SOx emission control areas, have a written procedure showing how fuel oil change-over is to be done for achieving compliance with the above requirements when entering SOx emission control areas?	4,663	99.38%	29	0.62%	1,912	28.95%	N/A	N/A
Q4*	Are alternative arrangements, (e.g. scrubbers) installed on board according to regulation 4.1 approved by the flag State?	217	99.54%	1	0.46%	6,386	96.70%	1	100%
Q5	Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.10% m/m in fuel oil and entering or leaving SOx emission control areas, record detailed information showing that the ship has completed/initiated the change-over in the logbook prescribed by the Administration?	4,330	98.45%	68	1.55%	2,206	33.40%	N/A	N/A
Q6	Do ships which have rechargeable systems containing ozone-depleting substances (refer to the supplement to the IAPP Certificate, item 2.1), have the ozone-depleting substances record book maintained?	2,225	94.84%	121	5.16%	4,258	64.48%	N/A	N/A

QUESTION NUMBER	CIC ON SAFETY OF NAVIGATION, INCLUDING ECDIS	YES		NO		N/A		%NO	
		#	% ¹	#	% ¹	#	% ²	#	% ³
Q7	Where an Approved Method in accordance with Annex VI, regulations 13.7.1-13.7.5 (refer to the supplement to the IAPP Certificate, item 2.2.1) is installed, has such an installation been confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method?	2,445	97.49%	63	2.51%	4,096	62.02%	N/A	N/A
Q8	For ships equipped with a shipboard incinerator or thermal waste treatment device installed as an alternative arrangement, is the ship's crew responsible for the operation of the equipment familiar with, properly trained in, and capable of implementing the guidance provided in the manufacturer's operating manual?	5,067	98.20%	93	1.80%	1,444	21.87%	N/A	N/A
Q9*	Are the master and crew familiar with essential shipboard procedures in the approved VOC Management Plan relating to the prevention of air pollution from ships?	803	99.88%	1	0.12%	5,800	87.83%	1	100%
Q10	Does the ship keep on board a Ship Energy Efficiency Management Plan (SEEMP)?	6,459	99.58%	27	0.42%	118	1.79%	N/A	N/A
Q11	Was the ship detained as a result of the Inspection Campaign?	5	0.07%	6,599	99.93%	0	0.00%	N/A	N/A

* If the answer to this question is 'NO' the ship may be considered for detention. The details of any detention should be appropriately entered on the PSC report B.

(1) The percentages are calculated using the total number of inspections where the answer was "YES" or "NO" only.

(2) The percentages are calculated using the total number of inspections.

(3) % ['NO' adjusted] = % [Answer = NO, may be considered for detention] but the ship has not been detained.

3.1.2 Analysis of answers to CIC Questionnaire in relation to detention

3.1.2.1 There were three questions for which the questionnaire stated that a 'NO' answer would mean that the ship may be considered for detention. These questions related to maximum sulphur content of fuel oils (Q2), approved alternative arrangements (such as scrubbers) (Q4) and master and crew familiarity with the approved Volatile Organic Compounds (VOC) Management Plan (Q9). Only one 'NO' answer was received for each of these questions. None of these ships were detained as a result of the non-compliance.

3.1.2.2 In the questionnaire three detentions were recorded as a result of the CIC (0.05%). Two of the detentions were given deficiency code 14602 the record of engine parameters and deficiency code 14601 technical files and if applicable monitoring manual, these both relate to Q7. The other detention was given deficiency code 14608 incinerator including operations and operating manual which relates to Q8.

3.1.3 Analysis of CIC-related related deficiencies

3.1.3.1 As indicated in Table 3, deficiency code 14608 which pertains to the incinerator including operations and operating manual, comprised the highest number of reported deficiencies for a single deficiency code (174 deficiencies or 19.6% of total deficiencies). This deficiency code also accounted for the most CIC-topic related detentions issued (three).

3.1.3.2 Q7 questions were composed of deficiency codes 14601, 14602 and 14613, relating to technical files, monitoring manual, record book of engine parameters and approved method, had the highest number of reported deficiencies for a single question (218 deficiencies or 24.5% of total deficiencies).

3.1.3.3 A high proportion of deficiencies were also recorded for deficiency code 14604 bunker delivery notes (148 deficiencies or 16.6% of total deficiencies) and for deficiency code 14611 ozone-depleting substances (144 deficiencies or 16.2% of total deficiencies).

3.1.4 Number of inspections and number of ships in CIC

Table 2- Number of inspections and number of ships in CIC

	INDIVIDUAL SHIPS INSPECTED DURING CIC	INSPECTIONS PERFORMED WITH A CIC QUESTIONNAIRE	INSPECTIONS WITHOUT A CIC QUESTIONNAIRE
Total	7,657	6,604	1,666
Detentions	194	140	58
Detentions with CIC-topic related deficiencies	7	5	2

3.1.5 Specification of CIC-related deficiencies

Table 3- Specification of CIC-topic related deficiencies

	CIC-TOPIC RELATED DEFICIENCIES	CIC INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED WITH RO RESPONSIBLE
		(# of inspections with this deficiency) One inspection can have multiple deficiencies	(Number of inspections with this deficiency recorded as ground for detention)	(Number of inspections with this deficiency recorded as ground for detention and RO related)
14604	Bunker Delivery Notes	148	0	0
14617	Sulphur content of fuel used	7	0	0
14615	Fuel change-over procedure	39	0	0
14699	Alternative arrangements (SOx)	33	0	0
14612	SOx records	77	0	0
14611	Ozone-depleting substances	144	0	0
14601	Technical files and if applicable, monitoring manual (62)	218	2	0
14602	Record book of engine parameters (144)			
14613	Approved Method (12)			
14608	Incinerator incl. operations and operating manual	174	3	0
14609	Volatile Organic Compounds in tankers	1	0	0
01328	Ship Energy Efficiency Management Plan	48	0	0
	Total	889	5	0

3.1.6 Number of ships to number of inspections in CIC

During the period of CIC, only one CIC inspection was conducted on each individual ship.

3.1.7 Number of inspected ships per Ship Risk Profile

Table 4- Number of inspected ships per Ship Risk Profile

SHIP RISK PROFILE	INSPECTIONS	DETENTIONS	DETENTION AS % OF INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED AS % OF INSPECTIONS
HIGH RISK SHIP (HRS)	2,047	93	4.54%	4	0.20%
STANDARD RISK SHIP (SRS)	2,414	45	1.87%	1	0.04%
LOW RISK SHIP (LRS)	2,143	2	0.09%	0	0.00%
TOTAL	6,604	140	2.12%	5	0.07%

3.1.8 Number of inspected ships and detentions per ship type

Table 5- Number of inspected ships and detentions per ship type

SHIP TYPE	INSPECTIONS	DETENTIONS	DETENTION AS A % OF INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED AS A % OF INSPECTIONS
Bulk carrier	2,402	57	2.37%	2	0.08%
Chemical tanker	483	8	1.66%	0	0.00%
Combination carrier	9	1	11.11%	0	0.00%
Container ship	1,171	13	1.11%	0	0.00%
Factory ship	2	0	0.00%	0	0.00%
Gas carrier	208	5	2.40%	2	0.96%
General cargo/multi-purpose ship	1,234	37	3.00%	0	0.00%
Heavy load carrier	15	1	6.67%	0	0.00%
High speed cargo craft	0	0	0.00%	0	0.00%
High speed passenger craft	4	0	0.00%	0	0.00%
Livestock carrier	13	1	7.69%	0	0.00%
MODU or FPSO	1	0	0.00%	0	0.00%
NLS tanker	11	0	0.00%	0	0.00%
Offshore service vessel	23	0	0.00%	0	0.00%
Oil tanker	428	4	0.93%	1	0.23%
Passenger ship	51	1	1.96%	0	0.00%
Refrigerated cargo vessel	127	10	7.87%	0	0.00%
Ro-Ro cargo ship	16	0	0.00%	0	0.00%
Ro-Ro passenger ship	15	0	0.00%	0	0.00%
Special purpose ship	11	0	0.00%	0	0.00%
Tugboat	35	1	2.86%	0	0.00%
Vehicle carrier	212	0	0.00%	0	0.00%
Wood-chip carrier	80	1	1.25%	0	0.00%
Other types of ship	53	0	0.00%	0	0.00%
Total	6,604	140	2.12%	5	0.08%

3.1.9 Inspections and detentions per Flag State

(see Annex 1.4)

3.1.9.1 During the CIC ships from 82 flag States underwent PSC inspections with the CIC questionnaire. The flag State receiving the highest number of inspections was Panama with 1,817 (27.5%), followed by Hong Kong, China with 649 (9.8%). Liberia and Marshall Islands were both the next highest receiving 620 (9.4%) each.

3.1.9.2 Of the five CIC-topic related detentions one each went to Liberia, Netherlands, Panama, Singapore and Vietnam. The flag States with the highest number of detentions were Panama with 35 detentions from 1817 inspections (1.93%), Marshall Islands with 15 detentions from 620 inspections (2.42%) and Liberia with 11 detentions from 620 inspections (1.77%). The flag States with the highest detention rate during the CIC were Federated States of Micronesia and Samoa who both had one detention from one inspection giving a 100% detention rate. The next highest was Qatar with a 33.33%

detention rate (one detention from three inspections). 43 flag States did not record any detentions. All of the flag States who received more than 100 inspections also received detentions.

3.1.10 Inspections and detentions per Recognized Organization

(see Annex 1.5)

3.1.10.1 The RO with the highest number of ships inspected during the CIC was Nippon Kaiji Kyokai with 2097 inspections (31.75%), followed by DNV GL AS with 896 inspections (13.6%) and Korean Register of Shipping with 640 inspections (9.7%). There were 40 class societies recorded, 123 ships had no RO and one ship had class undefined.

3.1.10.2 Bureau Veritas had the highest number of CIC-topic related detentions (two). Lloyd's Register, Panama Maritime Documentation Services and Vietnam Register had one detention each for CIC-topic related detentions.

3.1.10.3 The RO with the highest overall detention rate during the period was the Iranian Classification Society with 33.33% (one detention from three inspections), followed by the International Register of Shipping with 26.67% (four detentions from 15 inspections) and the Dromon Bureau of Shipping with 20.00% (two detentions from 10 inspections).

3.1.10.4 5,111 or 77.4% of the inspections were carried out on IACS member ships. (This is a large shift from the 2017 CIC where it was reported that IACS members constituted 90.85% of inspections). The CIC-topic related detention number from IACS member ships was three. Non-IACS member ships with 1,369 inspections had the remaining two detentions. Of the 124 ships with no RO or undefined class there were no CIC-topic related detentions.

3.1.10.5 Ships from 16 ROs recorded no detentions. All ships with ROs that had more than 100 inspections had detentions.

3.1.11 Ship age overview

(Table 6)

Table 6 Ship age overview

SHIP AGE (YEARS)	# OF INSPECTIONS	DETENTIONS	DETENTION AS A % OF INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED AS A % OF INSPECTIONS
0-5	1,123	5	0.45%	0	0.00%
6-10	2,250	40	1.78%	3	0.13%
11-15	1,557	28	1.80%	1	0.06%
16-20	725	25	3.45%	0	0.00%
21-25	571	17	2.98%	0	0.00%
26-30	240	10	4.17%	1	0.42%
31-35	87	9	10.34%	0	0.00%
36+	51	6	11.76%	0	0.00%
Total	6,604	140	2.12%	5	0.08%

3.1.11.1 As shown in Table 6, the number of inspections on ships of age 15 years or less was 4,930, accounting for 74.65% of the total ships inspected. Four of the five CIC-topic related detentions were for these vessels in this age range. The number of inspections on ships more than 15 years of age was 1,674, accounting for 25.35% of the total, with one CIC-topic related detention.

3.1.11.2 Ships aged 15 years or less had 73 detentions from 4,930 inspections, giving a detention rate of 1.5% for that age group, less than the total detention rate as a percentage of inspections. Ships aged over 15 years had 67 detentions from 1,674 inspections giving a much higher detention rate of 4%. Ships over 30 years of age had 15 detentions from 138 inspections giving a considerably higher detention rate of 10.9%, over 7 times the total rate. It is evident that older ships continue to raise the most concern during PSC inspections.

Annex 1 CIC Questionnaire

Annex 1.1 CIC on MARPOL Annex VI

MEMORANDUM OF UNDERSTANDING
ON PORT STATE CONTROL
IN THE ASIA-PACIFIC REGION



CONCENTRATED INSPECTION CAMPAIGN
ON MARPOL ANNEX VI
01/09/2018 to 30/11/2018

CIC on MARPOL ANNEX VI

Inspection Authority:			
Ship Name:		IMO Number:	
Date of Inspection:		Inspection Port:	

	Questions	Yes	No	N/A
1	Are bunker delivery notes, with details of fuel oil for combustion purposes, kept available on board for the required period of 3 years? Annex VI, regulation 18.5 and 18.6			
2*	Do bunker delivery notes indicate that fuel oils delivered and used on board is not exceeding the maximum allowed sulphur content, as appropriate? Annex VI, regulation 14.1.2 and 14.4.3			
3	Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.1% m/m in fuel oil while operating in SOx emission control areas, have a written procedure showing how fuel oil change-over is to be done for achieving compliance with the above requirements when entering SOx emission control areas? Annex VI, regulation 14.6			
4*	Are alternative arrangements, (e.g. scrubbers) installed on board according to regulation 4.1 approved by the flag State? Annex VI, regulation 4.1			
5	Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.10% m/m in fuel oil and entering or leaving SOx emission control areas, record detailed information showing that the ship has completed/initiated the change-over in the logbook prescribed by the Administration? Annex VI, regulation 14.6			
6	Do ships which have rechargeable systems containing ozone-depleting substances (refer to the supplement to the IAPP Certificate, item 2.1), have the ozone-depleting substances record book maintained? Annex VI, regulation 12.6			
7	Where an Approved Method in accordance with Annex VI, regulations 13.7.1-13.7.5 (refer to the supplement to the IAPP Certificate, item 2.2.1) is installed, has such an installation been confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method? Annex VI, regulation 13.7.1.1			
8	For ships equipped with a shipboard incinerator or thermal waste treatment device installed as an alternative arrangement, is the ship's crew responsible for the operation of the equipment familiar with, properly trained in, and capable of implementing the guidance provided in the manufacturer's operating manual? Annex VI, regulation 16.8			
9*	Are the master and crew familiar with essential shipboard procedures in the approved VOC Management Plan relating to the prevention of air pollution from ships? Annex VI, regulation 15.6			
10	Does the ship keep on board a Ship Energy Efficiency Management Plan (SEEMP)? Annex VI, regulation 22 paragraph 1			
11	Was the ship detained as a result of the Inspection Campaign?			

Note: Questions 1 to 10 answered with a "NO" MUST be accompanied by a relevant deficiency on the Report of Inspection.

If the box "NO" is ticked off for questions marked with an "*", the ship may be considered for detention.

Annex 1.2 Additional Instructions

Guidelines for PSCOs on the Inspection Campaign on MARPOL ANNEX VI

Introduction

General

- Air pollution from ships contributes to overall air quality problems in many areas and affects the natural environment. Pollution by sulphur and nitrogen oxides in fuel contributes to acid rain, increased eutrophication and reduced air quality.
- Following international cooperation in the combat against acid rain and ozone-depleting substances, the IMO, through the MEPC, included the issue of air pollution in its work programme. As a result of the work, through the Protocol of 1997, Annex VI has been included in the MARPOL Convention.
- MARPOL Annex VI sets limits on sulphur- and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone-depleting substances and volatile organic compounds.
- Furthermore, a new set of requirements stipulated in Annex VI of MARPOL (2008), with a strict limit on the sulphur content of marine fuels, entered into force on 1 January 2015 in SECAs. The requirement reduced the maximum sulphur content by 90 per cent in the area. The price of cleaner fuel is currently significantly higher than that of conventional fuel, which means that non-compliance would give ship owners a considerable competitive advantage and consequently reduce the environmental impact of the regulation.
- Effective and uniform enforcement is a prerequisite for ensuring cleaner air and the full environmental impact of the regulation. In practice, this requires a high priority on enforcement and strong and effective cooperation between national port State control authorities.

Purpose

The purpose of the campaign on MARPOL Annex VI is:

- to establish the level of compliance with the requirements of MARPOL Annex VI within the shipping industry;
- to create awareness amongst ship crews and ship owners with regards to the importance of compliance with the provisions of MARPOL Annex VI and the prevention of air pollution;
- to send a signal to the industry that prevention of air pollution and enforcement of compliance with applicable requirements is high on the agenda of the Tokyo MOU member States;

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- to underline the responsibility of the Port State Control regime with regards to harmonized enforcement of compliance with the requirements of MARPOL Annex VI, thus improving the level of compliance and ensuring a level playing field.

References

- MARPOL Annex VI, as amended.
- Tokyo MOU SWG Instruction – Guidelines for Port State Control Inspections for Compliance with Annex VI of MARPOL Regulations for the Prevention of Air Pollution from Ships.

Inspection

The inspection must be performed in accordance with the Tokyo MOU procedures. The campaign does not affect the type of inspection to be conducted in accordance with the procedures. The campaign consists of a list of questions to be answered in addition to the regular inspection. Where additional information is to be sought or consulted, the PSCO is guided by the following guidance.

In arriving at a “YES” or “NO” answer to each of the questions of the questionnaire, the following should be considered:

- Should a question be answered “NO”, a deficiency using the appropriate deficiency code listed in the guidance to the question must be used on the report of inspection Form B.
- A “NO” answer in the questionnaire should not automatically lead to detention of the ship. In this case, the PSCO should use his/her professional judgment to determine whether the vessel should be considered for detention.
- The column “N/A” is to be used only if the question is not applicable to the vessel and consequently the question cannot be answered.

Additional remarks

For PSCOs of Tokyo MOU, additional guidance (under-lined) for checking issues relating to the “EGCS functions” and “compliance of engines on or after 1st January 2000” corresponding to Q4 and Q7 is provided in the guidelines. In this context, although the answer to Q4 and/or Q7 is “YES”, PSCOs should check the relevant operational aspects and functional capabilities and, should there be clear ground established, proceed to the more detailed inspection thereon. However, deficiencies and detention stemming from the aforementioned more detailed inspection would be separate from answers to the CIC questionnaire.

Annex 1.3 Explanatory notes to the questions

Questionnaire guidance

Q 1 – Are bunker delivery notes, with details of fuel oil for combustion purposes, kept available on board for the required period of 3 years?

On ships of 400 gross tonnage and above, and on fixed or floating drilling rigs and other platforms, bunker delivery notes for fuel used for combustion purposes shall be kept on board.

The PSCO should check:

- That a representative selection of bunker delivery notes from the past three years has been correctly filled in and is below the limit (MARPOL Annex VI, regulation 18.7.1).
- In case the bunker delivery note as required by regulation VI/18 presented to the ship is not in compliance with the relevant requirements regarding the Sulphur content and the declaration of fuel conformity, the master or officer in charge of the bunkering operation should have documented this through a notification to the ship's flag Administration with copies to the port authority under whose jurisdiction the ship did not receive the required documentation pursuant to the bunkering operation and to the bunker deliverer. A copy should be retained on board the ship, together with any available commercial documentation, for subsequent scrutiny in connection with port State control (MARPOL Annex VI, regulation 18.2.4).

Requirements:

The sulphur content of any fuel oil used on board ships must not exceed 3.50% m/m.

For ships operating within an emission control area, the sulphur content of fuel oil used on board ships must not exceed 0.10% m/m.

A ship must notify its Administration and the competent authority of the relevant port of destination when it cannot purchase compliant fuel oil. The ship must be able to provide evidence that it attempted to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for fuel oil and that, despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase.

Details of fuel oil for combustion purposes delivered to and used on board must be recorded by means of a bunker delivery note that must include the following:

- Name and IMO number of receiving ship.
- Port.
- Date of commencement of delivery.
- Name, address and telephone number of marine fuel oil supplier.
- Product name(s).
- Quantity in metric tonnes. • Density at 15°C, kg/m³ • Sulphur content (% m/m).
- A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with the applicable paragraph of regulation 14.1 or 14.4 and regulation 18.3 of MARPOL Annex VI.

The bunker delivery note must be kept on board the ship for a period of three years after the fuel oil has been delivered on board.

The PSCO may make a copy of bunker delivery notes and may require the master to certify that each copy is a true copy of such bunker delivery note. The PSCO may also verify the content of each note through consultations with the port where the note was issued.

If inspecting ships not using fuel oil for combustion purposes e.g. LNG or battery powered ships the question should be answered with N/A.

Convention reference: Annex VI, regulation 18.5/18.6.

Deficiency code: 14604 – Bunker delivery notes.

Suggested action taken: 17.

Q 2 – Do bunker delivery notes indicate that fuel oils delivered and used on board is not exceeding the maximum allowed sulphur content, as appropriate? The PSCO should check:

- Whether the quality of fuel oil used on board the ship has a sulphur content of or below 3.50% m/m (MARPOL Annex VI, regulation 14.1.2) or 0.10 % depending on the sailing area.
- Correspondence between the bunker delivery notes and the ship's Oil Record Book in accordance with MARPOL Annex I (MARPOL Annex I, regulations 17.2.5 and 17.4).

Requirements:

The sulphur content of any fuel oil used on board ships must not exceed 3.50% m/m.

For ships operating within an emission control area, the sulphur content of fuel oil used on board ships must not exceed 0.10% m/m.

Bunkering of fuel oil must be recorded in the Oil Record Book Part I. Each completed operation must be signed by the officer(s) in charge of the operations concerned and each completed page must be signed by the master of the ship.

The PSCO may make a copy of any entry in the Oil Record Book Part I and may require the master to certify that the copy is a true copy of such entry.

Convention reference: Annex VI, regulations 14.1.2 and 14.4.3.

Deficiency code: 14617 – Sulphur content of fuel used.

Suggested action taken: 17, Ground for detention (tick box).

Q 3 – Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.10% m/m in fuel oil while operating in SOx emission control areas, have a written procedure showing how fuel oil change-over is to be done for achieving compliance with the above requirements when entering SOx emission control areas?

In case the ship never enters an ECA use the N/A tick box.

The PSCO should check:

- That a written procedure is readily available on board.

Requirements:

All ships when entering or leaving in an Emission Control Area, and using separate fuel oils to comply with the sulphur limits of fuel oil in an ECA, must have a written procedure showing how the fuel change-over is to be done.

Regulation 14.6 of the MARPOL Annex VI does not require that the written procedure must be in English. Thus, the shown procedure might be in a language that the PSCO cannot read. However, it is not the purpose of the question to assess the written procedure. The intention with the question is to assure that a written procedure is on board.

Convention reference: Annex VI, regulation 14.6.

Deficiency code: 14615 – Fuel change-over procedure.

Suggested action taken: If the vessel is in the ECA or will enter the ECA within 14 days – 17, 16.

If the vessel is outside the ECA and will not enter the ECA within 14 days – 16

Q 4 – Are alternative arrangements, (e.g. scrubbers) installed on board according to regulation 4.1 approved by the flag State?

The PSCO should check:

- If the ship's Administration has allowed an alternative arrangement that may be equivalent to the standards in MARPOL Annex VI, regulations 13 and 14 (MARPOL Annex VI, regulation 4.1).
- If such an alternative arrangement has been communicated to the Organization/IMO (MARPOL Annex VI, regulation 4.2).
- If such an alternative arrangement has functioned effectively.

For a ship fitted with an exhaust gas cleaning systems (EGCS), the record of measurement of SO₂ (ppm)/CO₂ (% v/v) of exhaust gas from the EGCS should not exceed the following ration in accordance with the 2015 Guidelines for exhaust gas cleaning systems (MEPC.259(68)):

.1 for ships engaged in voyages within ECA:

SO₂/CO₂ ≤ 4.3; or

.2 for ships not engaged in voyages within ECA:

SO₂/CO₂ ≤ 151.7

Requirements:

The Administration of a Party may allow any fitting, material, appliance or apparatus to be fitted in a ship, or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by MARPOL Annex VI if such fitting, material, appliance or apparatus, or other procedures, alternative fuel oils, or compliance methods are at least as effective in terms of emission reductions as that required by MARPOL Annex VI, including any of the standards set forth in regulations 13 and 14.

The Administration that allows a fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by MARPOL Annex VI must communicate this to the Organization for circulation to the Parties for their information.

An equivalent arrangement approved by the Administration must be recorded in 2.3.1.2 and/or 2.3.2.2 of the *Record of construction and equipment to the International Air Pollution Prevention Certificate* (IAPP Certificate).

Any fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by

MARPOL Annex VI must be recorded in 2.6 of the *Record of construction and equipment* to the *International Air Pollution Prevention Certificate* (IAPP Certificate).

Convention reference: Annex VI, regulation 4.1.

Deficiency code: 14699 – Other (MARPOL Annex VI).

Suggested action taken: 17, 16, Ground for detention (tick box).

Q 5 – Do ships which are using separate fuel oils to comply with the maximum sulphur content of 0.1% m/m in fuel oil and entering or leaving SOx emission control areas, record detailed information showing that the ship has completed/initiated the change-over in the logbook prescribed by the Administration?

In case the ship never enters an ECA use the N/A tick box.

The PSCO should check:

- that the recorded information related to the change-over of fuel is complete;
- that the recorded dates, times and ship's positions match the information to be found in the deck- and/or engine room logbooks;
- that the volumes of low sulphur fuel oils recorded at entering and exiting the ECA match the consumption figures of fuel oil as recorded in the engine room logbooks or other relevant documents (i.e. does the recorded amount of fuel in the tanks at exit of the ECA or at arrival at the port minus the recorded amount of fuel in the tanks at entry of the ECA match the (estimated) fuel consumption of the vessel).

Requirements:

Ships using separate fuel oils to comply with the sulphur limits in an ECA must have fully changed over to ECA compliant fuel before entering the ECA, and must not change over from ECA compliant fuel until after exiting the ECA.

When entering or exiting an ECA, the following information must be recorded in a logbook as prescribed by the ship's flag Administration or, in the absence of specific requirements from the flag State, in an appropriate logbook (e.g. in the oil record book or the engine room logbook):

- Date
- Time
- Position of the ship
- Volume of low sulphur fuel oils in each tank

The information must be recorded at the time of completion of the change-over when entering an ECA and at the time of commencement of the change-over when exiting an ECA.

When the vessel makes use of an alternative arrangement instead of separate fuel oils to comply with the sulphur limits in ECAs, the question should be answered with N/A.

Convention reference: Annex VI, regulation 14.6.

Deficiency code: 14612 – SOx records recording.

Suggested action taken: 99 - Master instructed to assure compliance from date of inspection.

Q 6 – Do ships which have rechargeable systems containing ozone-depleting substances (refer to the supplement to the IAPP Certificate, item 2.1), have the ozone-depleting substances record book maintained?

The PSCO should check that:

- the ship has an ozone-depleting substances record book (MARPOL Annex VI, regulation VI/12.6);
- there are effectively implemented maintenance procedures for the equipment containing ozone-depleting substances;
- the master or crew is familiar with the procedures to prevent emissions of ozone-depleting substances; and
- there are no deliberate emissions of ozone-depleting substances.

Requirements:

Installations containing ozone-depleting substances, other than hydro-chlorofluorocarbons, have been prohibited since 19 May 2005. All ships fitted with rechargeable systems containing ozone-depleting substances are required to maintain an ozone-depleting substances record book.

Each ship subject to regulation 6.1 which has rechargeable systems containing ozone-depleting substances must maintain an ozone-depleting substances record book. This record book may form part of an existing log-book or electronic recording system as approved by the Administration.

Entries in the ozone-depleting substances record book are to be recorded in terms of mass (kg) of substance and must be completed without delay on each occasion, in respect of the following:

- .1 recharge, full or partial, of equipment containing ozone-depleting substances; .2 repair or maintenance of equipment containing ozone-depleting substances; .3 discharge of ozone-depleting substances to the atmosphere:
 - .3.1 deliberate; and
 - .3.2 non-deliberate;
- .4 discharge of ozone-depleting substances to land-based reception facilities; and .5 supply of ozone-depleting substances to the ship.

Convention reference: Annex VI, regulation 12.6.

Deficiency code: 14611.

Suggested action taken: 17, 99.

Q 7 – Where an Approved Method in accordance with Annex VI, regulations 13.7.1-13.7.5 (refer to the supplement to the IAPP Certificate, item 2.2.1) is installed, has such an installation been confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship’s International Air Pollution Prevention Certificate of the presence of the Approved Method?

The PSCO should check that:

- examination if diesel engines, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres are installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 and an Approved Method for that engine has been certified by an Administration and was commercially available,
- a diesel engine, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres, which is installed on board a ship constructed on or after 1 January 1990 but prior to 1 January 2000, and an Approved Method for that engine has been certified by an Administration and

-
- was commercially available, for which an Approved Method is not installed after the first renewal survey specified in regulation VI/13.7.2,
- the Approved Method File (regulation VI/13.7),
 - the master or crew is familiar with the proper operation and maintenance of the diesel engines, in accordance with their T Approved Method file, as applicable, with due regard being paid to NOx Emission Control Areas.
 - examination if a parameter record book with a NOx Technical File for operating and maintaining a diesel engine with regard to all changes, including like-for-like replacements, and adjustment within the approval ranges made relative to an engine's components and settings are appropriate.

Requirement:

Marine diesel engines installed on a ship constructed prior to 1 January 2000.

A marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 must comply with the emission limits set forth in MARPOL Annex VI, regulation 13, subparagraph 7.4, provided that an Approved Method for that engine has been certified by an Administration of a Party and notification of such certification has been submitted to the Organization by the certifying Administration. Compliance with this paragraph must be demonstrated through one of the following: .1 installation of the certified Approved Method, as confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method; or .2 certification of the engine confirming that it operates within the limits set forth in MARPOL Annex VI, regulation 13, paragraph 3, 4, or 5.1.1 and an appropriate notation of the engine certification on the ship's International Air Pollution Prevention Certificate.

Marine diesel engines installed on a ship constructed on or after 1 January 2000.

A marine diesel engines with a power output of more than 130 kW installed on a ship constructed on or after 1 January 2000 must comply with the emission limits set forth in MARPOL Annex VI, regulation 13, subparagraph 3, 4, 5, 6, provided that a NOx Technical File for that engine had been certified by an Administration of a Party.

Convention reference: NOx Technical Code 2.3.6, 6.2.3.3, Annex VI, regulation 13.3, 13.4, 13.5, 13.7.1.1.

Deficiency code: 14601, 14602, 14613.

Suggested action taken: 17, 16

Q 8 – For ships equipped with a shipboard incinerator or thermal waste treatment device installed as an alternative arrangement, is the ship's crew responsible for the operation of the equipment familiar with, properly trained in, and capable of implementing the guidance provided in the manufacturer's operating manual?

The PSCO should check:

- if the crew responsible for the operation of the incinerator is familiar with the guidance and instructions given by the manufacturer.

Requirements:

Personnel responsible for the operation of a shipboard incinerator installed on or after 1 January 2000 must be trained to implement the guidance provided in the manufacturer's operating manual.

The PSCO should identify the responsible crew and determine how the crew is trained. The PSCO should inquire the identified responsible crew about the process of operating the equipment, the operational requirements outlined in the operation manual, the parameters to be controlled during operation and verify familiarity with the limitations on the substances allowed to be incinerated.

The PSCO should use his professional judgment when assessing the information received from the crew against the information found in the manual to determine whether the crew is trained, familiar and capable.

If a manufacturer's operating manual is not available the answer to question 8 should be NO. Care should be taken to not have an incinerator in operation where this is prohibited by local regulations.

Convention reference: Annex VI, regulations 16.8.

Deficiency code: 14608 – Incinerator incl. operations and operating manual. Suggested action taken: 17.

Q 9 – Are the master and crew familiar with essential shipboard procedures in the approved VOC Management Plan relating to the prevention of air pollution from ships?

The PSCO should check:

- If the master and the crew are familiar with essential shipboard procedures in the approved VOC Management Plan.

Requirements:

A tanker carrying crude oil is required to have implemented a VOC Management Plan. The VOC Management Plan should contain ship specific procedures, which are optimized to minimise the release of VOC emissions. These procedures are related to the loading, carriage and discharge of cargo and crude oil washing. The plan should also identify, and describe the use of, VOC reduction devices or equipment, if applicable.

Procedures should be available for the operation of the ship during loading of the cargo, during transit, during discharge of the cargo and during COW operations. The person responsible for the VOC management onboard, and the implementation of the plan, should be fully conversant with the content of the plan. Other crewmembers responsible for cargo operations or COW operations should be familiar with the procedures in the plan.

If no approved VOC Management Plan available, the answer to question 9 should be NO.

Convention reference: Annex VI, regulation 15.6.

Deficiency code: 14609 – Volatile Organic Compounds in tankers.

Suggested action taken: 17, Ground for detention (tick box).

Q 10 – Does the ship keep on board a Ship Energy Efficiency Management Plan (SEEMP)?

Regulation 22 requires that each ship of 400 gross tonnage and above shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS).

The PSCO should control the general availability of the SEEMP.

Within the scope of the CIC the PSCO is not supposed to check the content of the plan. The SEEMP might be in a language not understood by the PSCO.

Convention Reference: Annex VI, regulation 22 paragraph 1,
Deficiency code: 01328 - Ship Energy Efficiency
Management plan Suggested action taken: 17.

Q 11 – Has the ship been detained as a result of the Inspection Campaign?

Regarding the questionnaire, if the box “No” is ticked off for questions marked with an “*”, the deficiency found should be considered a serious breach of the MARPOL Annex VI requirements and the ship may be considered for detention.

If a ship is detained as a result of deficiencies found among the items listed in the questionnaire, PSCOs should answer “Yes” to question 11.

Annex 1.4 Inspections and detentions per Flag State

Table Annex 1.4

FLAG	INSPECTIONS	DETENTIONS	DETENTION AS A % OF INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED AS A % OF INSPECTIONS	BGW LIST*
Antigua and Barbuda	53	1	1.89%	0	0.00%	White
Australia	1	0	0.00%	0	0.00%	Not listed
Bahamas	151	2	1.32%	0	0.00%	White
Bangladesh	14	0	0.00%	0	0.00%	Grey
Barbados	6	1	16.67%	0	0.00%	Black
Belgium	12	0	0.00%	0	0.00%	White
Belize	165	8	4.85%	0	0.00%	Grey
Bermuda (GB)	11	0	0.00%	0	0.00%	White
Brunei Darussalam	1	0	0.00%	0	0.00%	Not listed
Cayman Islands (GB)	22	0	0.00%	0	0.00%	White
Chile	2	0	0.00%	0	0.00%	Not listed
China	108	1	0.93%	0	0.00%	White
Comoros	3	0	0.00%	0	0.00%	Not listed
Cook Islands	4	1	25.00%	0	0.00%	Grey
Croatia	4	1	25.00%	0	0.00%	Grey
Curacao	4	0	0.00%	0	0.00%	Grey
Cyprus	113	3	2.65%	0	0.00%	White
Denmark	36	0	0.00%	0	0.00%	White
Dominica	3	0	0.00%	0	0.00%	Grey
Egypt	2	0	0.00%	0	0.00%	Not listed
Equatorial Guinea	1	0	0.00%	0	0.00%	Not listed
Falkland Islands (UK) (Malvinas)	1	0	0.00%	0	0.00%	Not listed
Faroe Islands	1	0	0.00%	0	0.00%	Not listed
Finland	1	0	0.00%	0	0.00%	Not listed
France	12	0	0.00%	0	0.00%	White
Germany	22	0	0.00%	0	0.00%	White
Gibraltar (GB)	10	0	0.00%	0	0.00%	White
Greece	70	2	2.86%	0	0.00%	White
Hong Kong, China	649	2	0.31%	0	0.00%	White
India	16	1	6.25%	0	0.00%	Grey
Indonesia	28	2	7.14%	0	0.00%	Black
Iran, Islamic Republic of	13	2	15.38%	0	0.00%	Grey
Isle of Man (GB)	53	3	5.66%	0	0.00%	White
Israel	2	0	0.00%	0	0.00%	Not listed
Italy	27	0	0.00%	0	0.00%	White
Jamaica	5	1	20.00%	0	0.00%	Grey
Japan	47	1	2.13%	0	0.00%	White
Kiribati	9	0	0.00%	0	0.00%	Grey
Korea, Democratic People's Republic of	16	2	12.50%	0	0.00%	Black
Korea, Republic of	323	4	1.24%	0	0.00%	White
Kuwait	7	0	0.00%	0	0.00%	White
Liberia	620	11	1.77%	1	0.16%	White
Luxembourg	2	0	0.00%	0	0.00%	White
Malaysia	35	0	0.00%	0	0.00%	White

FLAG	INSPECTIONS	DETENTIONS	DETENTION AS A % OF INSPECTIONS	DETENTIONS CIC-TOPIC RELATED	DETENTIONS CIC-TOPIC RELATED AS A % OF INSPECTIONS	BGW LIST*
Maldives	1	0	0.00%	0	0.00%	Not listed
Malta	231	6	2.60%	0	0.00%	White
Marshall Islands	620	15	2.42%	0	0.00%	White
Micronesia, Federated States of	1	1	100.00%	0	0.00%	Black
Mongolia	9	0	0.00%	0	0.00%	Black
Myanmar	2	0	0.00%	0	0.00%	Not listed
Netherlands	20	1	5.00%	1	5.00%	White
Niue	6	1	16.67%	0	0.00%	Black
Norway	48	0	0.00%	0	0.00%	White
Pakistan	4	0	0.00%	0	0.00%	Grey
Palau	11	2	18.18%	0	0.00%	Black
Panama	1817	35	1.93%	1	0.06%	White
Papua New Guinea	1	0	0.00%	0	0.00%	Not listed
Peru	1	0	0.00%	0	0.00%	Not listed
Philippines	35	0	0.00%	0	0.00%	White
Portugal	78	1	1.28%	0	0.00%	White
Qatar	3	1	33.33%	0	0.00%	Not listed
Russian Federation	79	4	5.06%	0	0.00%	White
Saint Kitts and Nevis	2	0	0.00%	0	0.00%	Grey
Saint Vincent and the Grenadines	7	0	0.00%	0	0.00%	White
Samoa	1	1	100.00%	0	0.00%	Not listed
Saudi Arabia	8	0	0.00%	0	0.00%	White
Sierra Leone	73	7	9.59%	0	0.00%	Black
Singapore	432	3	0.69%	1	0.23%	White
Spain	1	0	0.00%	0	0.00%	Not listed
Sri Lanka	3	0	0.00%	0	0.00%	Grey
Sweden	4	0	0.00%	0	0.00%	White
Switzerland	4	0	0.00%	0	0.00%	Grey
Taiwan, Province of China	23	0	0.00%	0	0.00%	White
Thailand	59	1	1.69%	0	0.00%	White
Togo	66	4	6.06%	0	0.00%	Black
Turkey	4	0	0.00%	0	0.00%	Grey
Tuvalu	28	1	3.57%	0	0.00%	White
Ukraine	4	0	0.00%	0	0.00%	Not listed
United Kingdom	50	2	4.00%	0	0.00%	White
United States	12	1	8.33%	0	0.00%	White
Vanuatu	15	1	6.67%	0	0.00%	Grey
Vietnam	156	3	1.92%	1	0.64%	White
Total	6604	140	2.12%	5	0.08%	

Annex 1.5 Inspections and detentions per Recognized Organization

Table Annex 1.5

RO	# of inspection	Detentions	Detention as a % of inspections	Detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
American Bureau of Shipping	585	8	1.37%	0	0.00%
ASIA Classification Society	3	0	0.00%	0	0.00%
Biro Klasifikasi Indonesia	8	1	12.50%	0	0.00%
Bureau Veritas	573	19	3.32%	2	0.35%
China Classification Society	407	4	0.98%	0	0.00%
Cosmos Marine Bureau Inc.	14	0	0.00%	0	0.00%
CR Classification Society (CCRS)	21	1	4.76%	0	0.00%
Croatian Register of Shipping	7	0	0.00%	0	0.00%
Det Norske Veritas	18	0	0.00%	0	0.00%
DNV GL AS	896	16	1.79%	0	0.00%
Dromon Bureau of Shipping	10	2	20.00%	0	0.00%
Germanischer Lloyd	4	0	0.00%	0	0.00%
Indian Register of Shipping	9	1	11.11%	0	0.00%
Intermaritime Certification Services, ICS Class	73	3	4.11%	0	0.00%
International Naval Surveys Bureau	5	0	0.00%	0	0.00%
International Register of Shipping	15	4	26.67%	0	0.00%
International Ship Classification	9	1	11.11%	0	0.00%
Iranian Classification Society	3	1	33.33%	0	0.00%
Isthmus Bureau of Shipping, S.A.	33	4	12.12%	0	0.00%
Korea Classification Society	17	2	11.76%	0	0.00%
Korean Register of Shipping	640	9	1.41%	0	0.00%
Libyan Surveyor	1	0	0.00%	0	0.00%
Lloyd's Register	561	7	1.25%	1	0.18%
Macosnar Corporation	1	0	0.00%	0	0.00%
National Shipping Adjuster Inc.	1	0	0.00%	0	0.00%
New United International Marine Services Ltd.	4	0	0.00%	0	0.00%
Nippon Kaiji Kyokai	2,097	30	1.43%	0	0.00%

RO	# of inspection	Detentions	Detention as a % of inspections	Detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
Other	124	10	8.13%	0	0.00%
Overseas Marine Certification Services	28	1	3.57%	0	0.00%
Panama Maritime Documentation Services	20	2	10.00%	1	5.00%
Panama Register Corporation	1	0	0.00%	0	0.00%
Panama Shipping Registrar Inc.	3	0	0.00%	0	0.00%
Polski Rejestr Statkow (Polish Register of Shipping)	8	1	12.50%	0	0.00%
RINA Services S.p.A.	122	4	3.28%	0	0.00%
Russian Maritime Register of Shipping	84	4	4.76%	0	0.00%
Ship Classification Of Malaysia	1	0	0.00%	0	0.00%
Shipping Register of Ukraine (SRU)	3	0	0.00%	0	0.00%
Singclass International	1	0	0.00%	0	0.00%
Sing-Lloyd	11	0	0.00%	0	0.00%
Union Bureau of Shipping	35	1	2.86%	0	0.00%
Universal Maritime Bureau Ltd	25	1	4.00%	0	0.00%
Vietnam Register	123	3	2.44%	1	0.81%
Total	6,604	140	2.12%	5	0.08%