Report of the 2015 Concentrated Inspection Campaign (CIC) crew familiarization for encl. space entry

Paris MoU
on Port State Control

Executive Summary

The CIC on Familiarization of Crew on Enclosed Space entry was held between 1 September and 30 November 2015.

In general the results of the CIC on Familiarization of Crew on Enclosed Space Entry are positive and show a high level of compliance with the Enclosed Space Entry drills requirements of SOLAS.

The number of detentions that were CIC related was 1.7% which reflects a low percentage of CIC related detentions when compared with results from previous CIC's. The average percentage of detentions in the CIC period is comparable to the yearly average of detentions. The CIC related detentions were issued by a limited number of member States.

Based on the figures, "Enclosed space entry and rescue drills" (deficiency code 04118) is by far the largest deficiency leading to detentions (49 out of 71, 69%).

10% of the inspections were carried out without the CIC which, when compared with results from previous CIC's, is high.

In 19.4% of the inspections where the CIC questionnaire was carried out, a drill was not performed.

In general the results of the CIC indicate that Enclosed Space Entry drills regulations are being complied with. However the industry could pay more attention to training of the crew and onboard manuals,

Paris MoU should initiate a further review by member States on the large amount of "N/A" on drills and the recording of results.

Table of contents

1. Introduction

1.1 Purpose of this Report

The purpose of this report is to present the results of the CIC on Crew Familiarization for Enclosed Space Entry to both member States of the Paris MoU and the general public.

1.2 Objective of the CIC

The purpose of the Crew Familiarization for Enclosed Space Entry Concentrated Inspection Campaign (CIC) was to ensure that effective procedures and measures are in place to safeguard the seafarers who are serving on board ships. The purpose of the CIC was to establish the compliance with the relevant Conventions/Regulations, as applicable. More specifically to:

- ensure that there is compliance with the requirements of the SOLAS and STCW Conventions
- ensure that the Master, Officers and Crew are familiar with relevant equipment and have received training in carrying out their duties,
- raise safety awareness among the crew serving on board,
- ensure that ship's crew identify and understand the hazards associated with entry into enclosed spaces.

1.3 Scope of the CIC

The CIC was undertaken on all ships targeted for inspection within the Paris MoU Region between 1st September 2015 and 30th November 2015

1.4 General Remarks

General remarks to be included in the report:

- For the purpose of this report, a detention is an inspection containing at least one deficiency that is considered a ground for detention.
- The tables do not take into account inspections where the CIC questionnaire was not recorded, with exception of table 2.

2. Summary, Conclusions and Recommendations

2.1 Summary

In general the results of the CIC on Familiarization of Crew on Enclosed Space Entry are positive and show a high level of compliance with the Enclosed Space Entry drills requirements of SOLAS. The less positive elements do need attention though.

The result of detentions that were CIC related was 1.7% which reflects a low percentage of CIC related detentions when compared with results from previous CIC's. The average percentage of detentions in the CIC period is comparable to the yearly average of detentions. The CIC related detentions were issued by a limited number of member States.

Based on the figures, "Enclosed space entry and rescue drills" (deficiency code 04118) is by far the largest deficiency leading to detentions (49 out of 71, 69%).

Several observations are to be made:

1. 7.9 % of the drills performed were not considered to be satisfactory,
2. 10% of the inspections were carried out without the CIC which, when compared with results from previous CIC's, is high.
3. In 19.4% of the inspections where the CIC questionnaire has been used, a drill has not been carried out.

Although the evaluation of the CIC has provided valuable information, the analysis was limited due to:

1. The large number of "N/A" (not applicable) on questions related to drills
2. The use of the same deficiency code for several questions
3. A missing link in the text fields of the database recorded on deficiency code related to the question in the questionnaire.

2.2 Conclusions

In general the results of the CIC indicate that Enclosed Space Entry drills regulations are being complied with. The CIC did not lead to an increase in the rate of detentions. However the actual compliance, shown in drills, could be better. 7.9% of drills were found to be unsatisfactory.
.
Specific reasons for non-compliance could not be systematically analyzed because of the lack of linking the free text to the relevant questions.

Both industry and PSCO's should continue to pay attention to Enclosed Space Entry procedures.

The limited possibility of analysis does influence the final results. The set up of the questionnaire related to deficiency codes, the non-performance of drills and inconsistencies in recording data blur the present outcome. Results could be different if those limiting elements had not been present.

2.3 Recommendations

Based on the results of the CIC and the analysis several recommendations can be made:

1. Related to the percentage of non-compliance in drills the industry should pay more attention to training of the crew and onboard manuals,
2. Flag States and companies should monitor progress on the training on this subject,

3. CIC Questionnaire Results

3.1 Analysis

The CIC on Familiarization of Crew on Enclosed Space entry was held between 1st September and 30th November 2015.

The analysis is based on the results of the CIC questionnaire and on the data in the THETIS information system.

The results show that 4214 inspections were carried out during that period. 438 of those inspections, which is more than 10%, were done without the CIC questionnaire being completed. The reasons for member States not carrying out the CIC according to the procedure agreed by the Committee should be investigated to prevent it happening in the future.

There seems to be a recurring difference in the results on detentions from the CIC questionnaire (64) and the data on detentions recorded in the inspection database (54). This difference makes analysis difficult and also raises questions regarding the quality of reporting in general.

In general the percentage of detentions (3.7%) during the CIC is comparable to the average detention percentage on an annual basis.

The number of deficiencies recorded that are CIC related are considerably higher than in the period before the CIC (with the exception of “Enclosed space entry…”, that is only applicable from 1 July 2015). This indicates that the inspection effort has had added value on the subject matter regarding creating awareness. The increase in deficiencies on the subject has not lead to extra detentions.
The 1.7% detentions related to the CIC is an overall satisfactory result, because it is a small percentage but this result is somewhat blurred by the inconsistencies in the results on the different questions and the high number of “N/A” (not applicable) regarding drills.

The result of 1.7% detentions has been recorded by a limited number of member States which would indicate that there is no “overall” issue on the CIC subject within the Paris MoU.

3.1.1 Response to CIC questionnaire

Table 1 Response to CIC questionnaire

		nr Yes	"/Total Y+N"	nr No	"/Total Y+N"	nr N/A	"/Line lotal Insp"	Nr Blank	"/Line lotal Insp"	"Not detained/consider detained"
		Measured over only Yes and No answers				Measured over Total of CIC Inspections				
Nr.	**CIC Crew Familiarization and Entry of Enclosed Spaces**	'YES'(1)		'NO'(1)		N/A(2)		Blank(2)		% 'NO' adjusted Det.(3)
		#	%	#	%	#	%	#	%	
Q01	Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?	3607	95,8%	157	4,2%			12	0,3%	
Q02	Are crew members responsible for testing the atmosphere in enclosed spaces trained in the use of the equipment referred to in Question 1?	3495	97,0%	107	3,0%	159	4,2%	15	0,4%	0,0%
Q03*	Are the crew members familiar with the arrangements of the ship, as well as the location and operation of any on-board safety systems or appliances that they may be called upon to use for enclosed space entry?	3681	97,8%	82	2,2%			13	0,3%	
Q04*	Are crew members responsible for enclosed space emergency duties, familiar with those duties?	3317	88,1%	448	11,9%			11	0,3%	
Q05*	Is the training manual available on board and its contents complete and customized to the ship?	3147	83,9%	602	16,1%			27	0,7%	
Q06*	Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III, Regulation 19?	3592	95,5%	170	4,5%			14	0,4%	
Q07*	Have the ship's crew participated in an enclosed space entry and rescue drill on board the ship at least once every two months in accordance with SOLAS Chapter III, Regulation 19.3.3?	3568	95,2%	179	4,8%			29	0,8%	
Q08*	Are crew members responsible for enclosed space entry aware of the associated risks?	3651	97,4%	96	2,6%			29	0,8%	
Q09*	During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?	2794	92,1%	239	7,9%	734	19,4%	9	0,2%	82,4%
Q10	Is the ship detained as a result of a "NO" answer to any of the questions?	64	1,7%	3697	98,3%			15	0,4%	

* 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

On the 3776 inspections using the questionnaire the results are divided in “Yes”, “No”, “N/A” and “Blank”.
The number and therefore percentage “Blank” is small and doesn’t influence the results.
The result “N/A” on question number 9 (number of 734, 19,4%) does influence the results in a negative way. The question is “During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?”. If more “drills” had been carried out, the number of detentions would probably have been higher due to the “detainable” nature of the accompanying deficiency.

3.1.2. Analysis of answers to questionnaire in relation to detention

The CIC is intended to generate extra attention on new requirements or investigate a particular issue on subjects that have been the result of past inspections. Therefore the questionnaire and the results usually do not match the deficiencies leading to possible detentions recorded through the inspection reports.
Although attempts have been made to “harmonize” these outcomes, there is no direct link from the questionnaire results to deficiencies, and therefore detentions, to be made through database queries.
A manual check would take too much time. A check on the individual results in the database “text field” shows that results are not related to the questions either except for f Cyprus although specific linking of inspection remarks to the specific question was requested during the preparatory CIC seminar. The reason for the specific request was the fact that several questions lead to the same deficiency and the link was necessary for analysis purposes.

Although these restrictions complicate analysis, the results for several questions do reveal information on the subject. Only those questions where the answers need elaboration are discussed here.

Question 4: Are crew members responsible for enclosed space emergency duties, familiar with those duties?

The result of this question can be characterized as negative. 11.9% of the crew members that are responsible for enclosed space emergency duties are not familiar with those duties. Based on the fact that these are the crew members coordinating the rest of the crew members in cases of emergencies, this outcome is rather high and needs attention on the part of the companies and masters.

Regarding this question and the registration in the database a remark should be made regarding the faulty registration of a deficiency as such. The guidance to the questionnaire mentions that “where enclosed space emergency duties are not assigned on the muster list, the question should also be answered “NO” but no deficiency should be issued.”

Table 3 shows the CIC related deficiencies on 04118, “Muster list”. The result is “10”. The actual result should be “0”, because no deficiency should have been recorded if CIC related.

Question 5: Is the training manual available on board and its contents complete and customized to the ship?

The response to this question indicates 16.1% non availability and contents not complete. This might have to do with the fact that the actual manual specifically for enclosed space entry is not required. Even though not required 83.9% is available.

In case of non availability the subject as such isn’t mentioned in the manual or doesn’t comply yet to the circumstances of the ship. The number of questions to the secretariat on this question reflects the unclarity of either the question, or the actual requirement on the subject. Combined with the responses to question 4 (responsible crew familiar with duties) and question 9 (compliance of “drills”) there seems to be a risk of a systemic non conformity.

Question 6: Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III, Regulation 19?

The records on board shows that drills are carried out (95.5%). The results of those drills could be used for future input and improvements. Related to other results, it seems this input could be used in a more satisfactory way.

Question 7: Have the ship's crew participated in an enclosed space entry and rescue drill on board the ship at least once every two months in accordance with SOLAS Chapter III, Regulation 19.3.3?

The records show that 95.2% have participated in drills. Again, though a large percentage, the question remains why questions 4 and 9 are less satisfactory.

Question 9: During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?

The first observation with this question is the result that 19.4% didn't perform a drill. A limited percentage "N/A" would be acceptable. This percentage seems rather high. The data on the questionnaires do not show an explanation. It would be helpful to have member States look into this fact within their own organization to find out what could be the cause. If a larger number of drills had been performed, the result of question 10, could have been much more negative. This number of "N/A" could therefore blur the outcome and possible actions to be taken of this CIC.

From the inspections where a drill was executed 7.9% were not compliant. Due to the fact that the text fields on the deficiency code are not linked to the question (as Cyprus has done and was prescribed) it is not possible find out what causes the non-compliance.

Question 10: Is the ship detained as a result of a "NO" answer to any of the questions?

The detention score on the questionnaire is 64. As earlier mentioned, the registration in the inspection database only shows 54. PSCO's should be accurate in registering data.
Taking into account the result of question 9 for "N/A" a simulation of that data would result in a fictitious 3.2% detention. The ratio would be that non compliance in a drill would probably always lead to detention. Hence the importance of finding out the large number of "N/A" in question 9.

3.1.3. Analysis of CIC-topic related deficiencies

The tables 2 and 3 show the results on the CIC topic related deficiencies.

Based on those figures it shows that "Enclosed space entry and rescue drills" (deficiency code 04118) is the largest topic related to detentions (49 out of 71, 69%).
Looking at the deficiencies "Enclosed space entry and rescue drills" and "onboard training and instructions" are the largest. Percentage wise 50% and 32%.

Regarding flag performance related to the CIC, flag States on the black list perform poorly on the CIC. Several flag states (6) white and grey listed, show more than the average percentage of 1.7.

The remark about the incorrect recording of deficiency 04118 related to question 4 that shows in table 3 should also be mentioned here – "no. of inspections with this deficiency recorded as ground for detention and RO related"

3.1.4. Number of inspections and number of ships in CIC

The following table shows the total number of the CIC's held. Note the number of 4117 "individual ships inspected during CIC". This isn't comparable to the inspections with a CIC questionnaire" (3776) and "inspections without a CIC questionnaire"(438) and therefore doesn't add up.

Table 2 Number of inspections and number of ships in CIC

	INDIVIDUAL SHIPS INSPECTED DURING CIC	INSPECTIONS WITH A CIC QUESTIONNAIRE	INSPECTIONS WITHOUT A CIC QUESTIONNAIRE
TOTAL	4117	3776	438
DETENTIONS	160	140	20
DETENTIONS WITH *CIC-TOPIC* RELATED DEFICIENCIES	54	53	1

3.1.5 Specification of CIC-topic related deficiencies

Table 3 Specification of CIC-topic related deficiencies

CIC-topic related deficiencies		**Inspections**	**Detentions CIC-topic related**	**Detentions CIC-topic related with RO responsibility**
		(# of inspections with this deficiency) One inspection can have multiple deficiencies	(# of inspections with this deficiency recorded as ground for detention)	(# of inspections with this deficiency recorded as ground for detention and RO related)
11131	On board training and instructions	219	3	0
4118	Enclosed space entry and rescue drills	347	49	1
7123	Operation of Fire protection systems	55	9	0
4108	Muster list	74	10	0

3.1.7 Number of inspected ships per Ship Risk Profile

Table 5 Number of inspected ships per Ship Risk Profile

Ship Risk Profile	**# of inspections**	**# of detentions**	**detention as % of inspections**	**detentions CIC-topic related**	**detentions CIC-topic related as % of inspections**
High Risk Ship (HRS)	181	28	15,5%	15	8,3%
Standard Risk Ship (SRS)	3151	105	3,3%	37	1,2%
Low Risk Ship (LRS)	172	0	0,0%	0	0,0%
Unknown	272	7	2,6%	1	0,4%
Total	3776	140	3,7%	53	1,4%

3.1.8 Number of inspected ships and detentions per ship type

Ship type	# of inspections	# of detentions	detention as % of inspections	detentions CIC-topic related	detentions CIC-topic related as % of inspections
Bulk carrier	889	27	3,0%	11	1,2%
Chemical tanker	368	7	1,9%	2	0,5%
Commercial yacht	22	3	13,6%	0	0,0%
Container	356	8	2,2%	2	0,6%
Gas carrier	110	0	0,0%	0	0,0%
General cargo/multipurpose	1151	72	6,3%	28	2,4%
Heavy load	16	0	0,0%	0	0,0%
High speed passenger craft	2	0	0,0%	0	0,0%
Offshore supply	84	2	2,4%	0	0,0%
Oil tanker	316	6	1,9%	2	0,6%
Other	32	4	12,5%	4	12,5%
Other special activities	89	1	1,1%	0	0,0%
Passenger ship	39	1	2,6%	0	0,0%
Refrigerated cargo	84	5	6,0%	3	3,6%
Ro-Ro cargo	150	1	0,7%	0	0,0%
Ro-Ro passenger ship	17	0	0,0%	0	0,0%
Special purpose ship	16	0	0,0%	0	0,0%
Tug	23	2	8,7%	1	4,3%
NLS tanker	9	1	11,1%	0	0,0%
Combination carrier	3	0	0,0%	0	0,0%
Total	**3776**	**140**	**3,7%**	**53**	**1,4%**

3.1.9 Inspections and detentions per Flag State

(see Annex 1.4)

3.1.10 Inspections and detentions per Recognized Organization

(see Annex 1.5)

3.1.11 Ship age overview
(Table 7)

Ship age*	# of inspections	# of detentions	Detention as a % of inspections	Detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
≤ 5 years	721	4	0,6%	2	0,3%
6-10 years	999	28	2,8%	6	0,6%
11-15 years	664	20	3,0%	6	0,9%
16-20 years	527	17	3,2%	5	0,9%
21-25 years	261	10	3,8%	1	0,4%
26-30 years	201	13	6,5%	6	3,0%
31-35 years	210	26	12,4%	17	8,1%
> 35 years	193	22	11,4%	10	5,2%
Total	**3776**	**140**	**3,7%**	**53**	**1,4%**

3.2 Results other CIC participants

3.2.1. Analysis

3.2.2. Comparison of CIC-results with other participants
(Table 9)

	Paris MOU	Tokyo MoU	Black Sea MoU	Indian Ocean MoU
INSPECTIONS	3776	6826	1022	1137
DETENTIONS	160		49	83
DETENTIONS AS A % OF INSPECTIONS	4.2%		4.8%	7.3%
DETENTIONS WITH CIC-TOPIC RELATED DEFICIENCIES	64		20	8
DETENTIONS WITH CIC-TOPIC RELATED DEFICIENCIES AS A % OF INSPECTIONS	1.69%		1.96%	0.70%
DETENTIONS WITH CIC-TOPIC RELATED DEFICIENCIES AS A % OF DETENTIONS	40%		40.82%	9.64%

Annex 1

Annex 1.1 Inspection form of the CIC

CIC on Enlosed Space Entry and familiarization of crew

*This CIC applies to **all** ships*

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

No.	Item	Yes	No	N/A
Q.1 Note 1	Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?	❒	❒	
Q.2 Note 1	Are crew members responsible for testing the atmosphere in enclosed spaces trained in the use of the equipment referred to in Question 1?	❒	❒	❒

No.	Item	Yes	No	N/A
Q.3 *	Are the crew members familiar with the arrangements of the ship, as well as the location and operation of any on-board safety systems or appliances that they may be called upon to use for enclosed space entry?	❒	❒	
Q.4 *	Are crew members responsible for enclosed space emergency duties, familiar with those duties?	❒	❒	
Q.5 *	Is the training manual available on board and its contents complete and customized to the ship?	❒	❒	
Q.6 *	Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III, Regulation 19?	❒	❒	
Q.7 *	Have the ship's crew participated in an enclosed space entry and rescue drill on board the ship at least once every two months in accordance with SOLAS Chapter III, Regulation 19.3.3?	❒	❒	
Q.8 *	Are crew members responsible for enclosed space entry aware of the associated risks?	❒	❒	
Q.9 *	During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?	❒	❒	❒
Q.10	Is the ship detained as a result of a "NO" answer to any of the questions?	❒	❒	

Note 1 For Paris MoU, questions 1 & 2 are for information purposes only.

Note 2 Each question should be answered and only one box ticked for that question.

Note 3 Questions with an asterisk indicate Code 30 may be issued.

The CIC on Crew Familiarization for Enclosed Space Entry was conducted during the period September – November 2015.

Annex 1.2 Additional Instructions for the CIC

CIC Additional Instructions

The purpose of the Crew Familiarization for Enclosed Space Entry Concentrated Inspection Campaign (CIC) is to ensure effective procedures and measures are in place to safeguard the seafarers who are serving on board ships. The CIC questions relate to SOLAS.

The 2015 CIC applies to ALL ships.

These guidelines have been prepared to assist Port State Control Officers (PSCOs) in conducting their inspections under this CIC. It is expected that the PSCO should already be familiar with the relevant sections of the applicable conventions.

The guidelines are not intended to be a definitive check list. The PSCO should also use his or her professional judgment, and knowledge of the convention requirements in conducting the inspection and eliciting responses to the questions.

A ship should only be subject to one inspection under this CIC during the period of the campaign
(1 September to 30 November 2015). PSCOs should check Port State Control (PSC) records within THETIS to determine whether the CIC has been previously conducted on the ship during the CIC period.

Purpose

The purpose of this CIC is to get a detailed insight of the compliance with the relevant Conventions/Regulations as applicable. **It is strongly recommended that PSCOs read the guidance notes.**

The following guidance is provided to assist the PSCOs in checking all aspects of compliance with the questions on Crew Familiarization for Enclosed Space entry during a PSC Inspection. In addition to the guidance, PSCOs should refer to the following documents

- SOLAS (including SOLAS 2013 Amendment/Chapter III/Regulation 19, effective implementation date 01/01/2015).
- MARPOL
- STCW

In arriving at a “Yes” or “No” answer to each of the 10 questions the following point needs to be considered.

- Should a “No” be answered, a deficiency using the appropriate deficiency code as listed on the checklist shall be issued on Form B for the PSC inspection.
- If a deficiency in the report of inspection is related to the questionnaire a “No” answer should be recorded against the relevant question.

Objective

The objective of this CIC is to:

- ensure that there is compliance with the requirements of the SOLAS and STCW Conventions as applicable
- ensure that the Master, Officers and Crew are familiar with relevant equipment and have received training in carrying out their duties
- raise safety awareness among the crew serving on board
- ensure that ship’s crew identify and understand the hazards associated with entry into enclosed spaces.

Annex 1.3 Explanatory notes to the questions

Questionnaire guidance

Question 1
Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?
This question is for information purposes only and no action should be taken. There is no mandatory requirement *at present* for all ships to carry instruments for measuring the atmosphere in enclosed spaces (Note 1). ***Note 1:*** *The requirement for ships to carry atmosphere testing instruments for enclosed spaces will become mandatory from 1 July 2016 (Chapter XI-1, new regulation 7). Circular MSC.1/Circ. 1477 provides guidance on selection of such instruments.*

Question 2
Are crew members responsible for testing the atmosphere in enclosed spaces trained in the use of the equipment referred to in Question 1?
Where on-board equipment is NOT provided for use by crew to test atmospheres in enclosed spaces, this question should be answered as "N/A" (NOT APPLICABLE). Where on-board equipment IS provided and used by crew to test atmospheres in enclosed spaces, the crew members responsible for testing should be trained in the correct use and the limitations of the testing equipment and be able to demonstrate that they can use it competently. In particular they should be aware that oxygen, flammable or toxic gas or vapour concentrations may not be uniform throughout the space and it may not be possible to measure concentrations throughout the entire space prior to entry. The PSCO should: 1. Verify who are the persons responsible for determining that it is safe to enter enclosed spaces on the ship. 2. Verify, by questioning and inspection of records, whether those persons have been trained in the use of the testing equipment. 3. Verify, by questioning and demonstration, that those persons know how to use the equipment properly including any calibration prior to use. 4. Verify, by questioning, that those persons are aware of the particular hazards associated with the type of ship or cargo being carried e.g. oxygen-depleting cargoes and materials, and so are using the appropriate testing equipment and sampling techniques to determine whether the enclosed space is safe. 5. Verify by inspection that manufacturer's instructions are available for the testing equipment and by questioning that the persons responsible for using the equipment are familiar with those instructions. 6. Verify by questioning that those persons are aware of the limitations of testing equipment and testing procedures when determining whether the atmosphere in the enclosed space and any adjacent space is safe for entry, and continues to be safe while any person is in that space[1].

[1] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011

Question 3
Are the crew members familiar with the arrangements of the ship, as well as the location and operation of any on-board safety systems or appliances that they may be called upon to use for enclosed space entry?
Items to check: Check that crew members: • Are aware of which spaces on the ship are identified as enclosed spaces for the purposes of entry- *all crew* • Are aware of the procedures for enclosed space entry that operate on the ship and are familiar with the entry permit system for access to such spaces. This should include communications procedures used when enclosed space entry is being undertaken - *all crew* • Are familiar with the location and use of safety equipment that may be used for enclosed space entry and rescue, such as ventilation, lifting and other personnel rescue equipment that may be required in an emergency, first aid and resuscitation equipment, gas testing equipment, fire extinguishers, breathing apparatus etc - *specifically designated crew* • Can carry out checks on breathing apparatus and correctly don the equipment – *specifically designated crew* As there is the potential for fire or serious injury to occur during enclosed space operations, crew need to be familiar with the ship-wide emergency systems and equipment. In order to test safety systems and appliances that may be used in enclosed space entry, crew should have knowledge of both the location and operation of the equipment. Any lack of familiarity may indicate that testing has not been carried out or that onboard familiarization training (STCW Regulation I/14) has been ineffective or that drills have not been carried out.

Convention Reference:	SOLAS 2012 Amendment Chapter II-2/Regulation 15.2.2
Deficiency Code:	07123
Nature of Defect:	Lack of familiarity
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the lack of familiarity can pose a danger to ship's personnel An ISM-related deficiency may be recorded

Question 4	
Are crew members responsible for enclosed space emergency duties familiar with those duties?	
Crew members with assigned emergency duties are required to be familiar with those duties before the voyage begins. The PSCO should consult the muster list required by SOLAS 1996-1998 Amendment Chapter III/Regulation 37 which should show the duties assigned to different members of the crew in emergency situations. Individual crew members may be questioned on their assigned duties on the muster list and requested to demonstrate them to the PSCO. On a vessel with a large crew a sampling process may be undertaken. The PSCO should also identify those crew members with enclosed space emergency duties and confirm they are familiar with them. SOLAS does not specifically require enclosed space emergencies to be identified on the muster list but duties in the event of such an emergency should also be clearly assigned. 1. Where emergency duties are not fully assigned on the muster list in accordance with SOLAS Chapter III/Regulation 37 or crew members are not familiar with their assigned duties, the question should be answered “NO” and a deficiency may be considered. 2. Where enclosed space emergency duties are not assigned on the muster list, the question should also be answered “NO” but no deficiency should be issued.	
Convention Reference:	SOLAS 2013 Amendment Chapter III/Regulation 19
Deficiency Code:	04108
Nature of Defect:	Lack of familiarity
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the lack of familiarity can pose a danger to ship’s personnel An ISM-related deficiency may be recorded

Question 5 *	
Is the training manual available on board and its contents complete and customized to the ship?	
Crew members should be able to state where the training manual is located. The PSCO should be aware that the training manuals must be located in the following locations on-board: • crew mess rooms • recreation rooms, or • in each crew cabin The training manual, which may comprise several volumes, shall contain instructions and information, in easily understood terms and illustrated wherever possible, on safety equipment provided in the ship (ship specific) and should specifically address enclosed space entry. Any part of such information may be provided in the form of audio-visual aids in lieu of the manual. SOLAS does not specifically require the training manual to include instructions on enclosed space entry and emergencies, however it is anticipated that the training manual will address these matters. The training manual must be in the working language of the ship. 1. Where the training manual does not fully address the requirements of SOLAS Chapter II-2/Regulation 15.2 and Chapter III/Regulation 35, or crew members do not know the location of the manual, the question should be answered “NO” and a deficiency may be considered. *2.* Where the training manual does not include instructions on enclosed space entry and emergencies, the question should be answered “NO”,.	
Convention Reference:	SOLAS Chapter II-2/Regulation 15.2 SOLAS 2006 Amendment Chapter III/Regulation 35
Deficiency Code:	11131
Nature of Defect:	Missing instructions, missing manuals Not as required
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the manuals are not available onboard. An ISM-related deficiency may be recorded

Question 6
Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III, Regulation 19[2]?
1. A drill should be carried out (refer to Question 9) and the outcome of this question should be linked to the outcome of the drill. If the drill is not conducted in a safe manner (e.g. atmosphere not checked or personal protective equipment not used) and there are clear grounds for believing that drills are not planned and conducted in a safe manner, then a deficiency should be recorded. 2. Enclosed space entry and rescue drills must include, as a minimum, all of the requirements specified in the referenced regulation. 3. During the drill required by Question 9 the PSCO should verify that: a) personal protective equipment required for entry was checked and used. b) communication equipment and procedures were checked and used. c) instruments for measuring the atmosphere in enclosed spaces were checked and used. d) rescue equipment and procedures were checked and used. e) instructions in first aid and resuscitation techniques were provided 4. A sample enclosed space entry permit is shown and completion of the permit prior to entry would provide evidence that pre-entry checks were carried out[1].

Convention Reference:	SOLAS 2013 Amendment Chapter III/Regulation 19.3.6.1, 19.3.6.2, 19.5
Deficiency Code:	04118
Nature of Defect:	Lack of training, not as required
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the lack of training can pose a danger to ship's personnel. An ISM-related deficiency may be recorded

[2] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011

Question 7 *	
Have the ship's crew participated in an enclosed space entry and rescue drill on board the ship at least once every two months in accordance with SOLAS Chapter III, Regulation 19.3.3?	
The frequency of drills for those with enclosed space entry responsibilities is specified as once every two months as a minimum. Dates when enclosed space entry and rescue drills are held are required to be recorded in the log, as is the case for musters, abandon ship and other emergency drills. When drills are not held at the appointed time, an entry shall be made in the log book stating why the drill was not conducted. The PSCO should: a) Request records and review them to verify that enclosed space entry and rescue drills have been carried out as scheduled. b) Confirm who has assigned responsibilities for enclosed space entry and rescue drills (see question 2). They should confirm that those crew members have taken part in the drills conducted at the required frequency both by reference to the records and verifying directly with the crew members concerned[3].	
Convention Reference:	SOLAS 2013 Amendment Chapter III/Regulation 19
Deficiency Code:	04118
Nature of Defect:	Insufficient frequency, no recorded drills
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if no drill has taken place. An ISM-related deficiency may be recorded

[3] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011

Question 8
Are crew members responsible for enclosed space entry aware of the associated risks?
The atmosphere in any enclosed space may be oxygen-deficient or oxygen-enriched, and/or contain flammable and/or toxic gases or vapours. Such unsafe atmospheres could also subsequently occur in a space previously found to be safe. Unsafe atmospheres may also be present in spaces adjacent to those spaces where a hazard is known to be present. Crew members responsible for enclosed space entry should know what the safe levels for oxygen, flammable and toxic vapours are. They should also be aware of the limitations of any testing that is carried out to verify safe conditions exist in the enclosed space and the need to continue to monitor the conditions for the duration of the entry[4]. In addition every crew member should have been given instruction on the risks associated with entry into enclosed spaces. Crew members should be able to identify areas on board that might normally be considered to be enclosed spaces such as tanks, cargo hatches, cargo access ways, void spaces, engine crankcases, scavenge spaces etc. and be aware of the need to implement safe entry procedures according to the on-board practices. The PSCO should: 1. Verify that information on enclosed space entry for crew members with responsibilities for enclosed space entry and rescue is provided. 2. Verify that crew members with responsibilities for enclosed space entry and rescue are aware of what spaces have been identified as enclosed spaces and the risks associated with entry into those spaces (hazards may be different for different spaces). 3. Verify that crew members with responsibilities for enclosed space entry and rescue are aware that there is a procedure for safe entry into enclosed spaces. 4. Verify that crew members with responsibilities for enclosed space entry and rescue are familiar with the atmospheric limitations required to be confirmed prior to entry. 5. Verify that crew members with responsibilities for enclosed space entry and rescue are aware of factors that may result in oxygen deficiency in the enclosed spaces on their particular ship such as the internal structure of the space, the nature of cargo in the space, the effects of cargo residues and tank coatings. 6. Verify that crew members with responsibilities for enclosed space entry and rescue are aware that there may be a need to test for specific toxic contaminants such as benzene or hydrogen sulphide in some circumstances. 7. Verify that crew members with responsibilities for enclosed space entry and rescue are aware that unsafe atmospheres may also occur in spaces adjacent to those spaces where a hazard is known to be present and that this needs to be reflected in the procedures.

Convention Reference:	SOLAS 2013 Amendment/Chapter III/Regulation 19
Deficiency Code:	04118
Nature of Defect:	Lack of familiarity, lack of training.

[4] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011

Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the lack of training or familiarity can pose a danger to ship's personnel. An ISM-related deficiency may be recorded[5]

Question 9
During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?

The PSCO is to request that a drill be conducted during the CIC. The purpose of the drill is to:

- demonstrate that the crew are familiar with their assigned duties for enclosed space entry and rescue
- verify that crew are able to conduct enclosed space entry and rescue drills competently and in a safe manner.
- verify that crew can communicate effectively during both a planned entry and in an emergency situation.

The drill will serve to further confirm that the requirements for familiarization, training and instruction have been met. The drill is to be conducted in a safe area on the ship and in a safe manner.

IT MUST NOT BE IN AN ENCLOSED SPACE or any space which has been designated as such.

It is anticipated that the drill will take no longer than 20 minutes.

The PSCO should devise the emergency scenario on which the drill will be based in conjunction with the master. The scenario should reflect a designated enclosed space on the ship, and the hazards associated with entry into that particular space.

The PSCO should:

1. Verify that those responsible for the drill can identify the specific hazards of the enclosed space, including but not limited to:
   a) The atmosphere in the enclosed space
   b) What testing is needed to confirm that entry is safe and will remain safe
   c) Any limitations on the ability to confirm that conditions are safe
   d) Any difficulties with access, or matters that may impede quick and effective rescue.
2. Verify that the prescribed safety briefings are given, and the required authorisations (permits) are completed and sign-offs are obtained. Those taking part should be identified on the appropriate checklists and authorisations.
3. Verify that personal protective equipment is available and correctly worn.
4. Verify that communications equipment is available and working correctly, and that communications procedures, including emergency signals, are agreed and tested prior to entry. This should include stationing a crew member at the entry point for the duration of the entry, confirmation of entry, monitoring of persons in the space and confirmation of exit.
5. Verify that equipment for testing the atmosphere if available, is working, and is suitable for the

[5] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011

Question 9	
purpose for which it is being used, is correctly calibrated and has been serviced in accordance with the manufacturer's instructions. 6. Verify that those crew members responsible for testing understand how to use the equipment and any limitations of the equipment (see also Question 2). 7. Verify what steps are taken to make the space safe if testing indicates that the atmosphere is not safe to enter. 8. Verify that rescue equipment is in place, in good order and ready for use, and that those who have designated rescue responsibilities are trained in its use. 9. Verify that at the end of the drill all the necessary records are completed and the 'enclosed space' secured[6].	
Convention Reference:	SOLAS 2013 Amendment/Chapter III/Regulation 19
Deficiency Code:	04118
Nature of Defect:	Drill not conducted in accordance with the requirements of SOLAS
Suggested Action Taken Code:	17 Code 30 (detention) may be considered if the crew could not successfully conduct the drill or if there were significant failures identified during the drill that could pose a danger to persons during enclosed space entry. An ISM-related deficiency may be recorded

Question 10
Is the ship detained as a result of a "NO" answer to any of the questions?
If the box "NO" is ticked off for questions marked with an * the ship may be considered for detention. The detail of any deficiencies should be appropriately entered on the PSC Report of Inspection – Form B and include the deficiency code as indicated in the question.

[6] Revised recommendations for entering enclosed spaces aboard ships – Resolution A.1050(27) adopted 30 November 2011.

Appendix 1: IMO Resolution A.1050(27) Appendix

Resolution A.1050(27) is only a recommendation and no deficiency should be raised based on this Resolution.

The example of an enclosed space entry permit is taken from the above resolution.

APPENDIX

EXAMPLE OF AN ENCLOSED SPACE ENTRY PERMIT

This permit relates to entry into any enclosed space and should be completed by the master or responsible person and by any persons entering the space, e.g. competent person and attendant.

GENERAL

Location/name of enclosed space

Reason for entry .....

This permit is valid from:_____hrs Date .....
to:_____hrs Date .....
(See Note 1)

SECTION 1 – PRE-ENTRY PREPARATION
(To be checked by the master or nominated responsible person)

	Yes	No
• Has the space been thoroughly ventilated by mechanical means?	.....	.....
• Has the space been segregated by blanking off or isolating all connecting pipelines or valves and electrical power/equipment?	.....	.....
• Has the space been cleaned where necessary?	.....	.....
• Has the space been tested and found safe for entry? (See note 2)	.....	.....
• Pre-entry atmosphere test readings:		
- oxygen .....% vol (21%)* By:		
- hydrocarbon .....% LFL (less than 1%)		
- toxic gases ..... ppm (less than 50% OEL of the specific gas) Time: (See note 3)		
• Have arrangements been made for frequent atmosphere checks to be made while the space is occupied and after work breaks?	.....	.....
• Have arrangements been made for the space to be continuously ventilated throughout the period of occupation and during work breaks?	.....	.....
• Are access and illumination adequate?	.....	.....

* Note that national requirements may determine the safe atmosphere range.

	Yes	No
• Is rescue and resuscitation equipment available for immediate use by the entrance to the space?	"	"
• Has an attendant been designated to be in constant attendance at the entrance to the space?	"	"
• Has the officer of the watch (bridge, engine-room, cargo control room) been advised of the planned entry?	"	"
• Has a system of communication between all parties been tested and emergency signals agreed?	"	"
• Are emergency and evacuation procedures established and understood by all personnel involved with the enclosed space entry?	"	"
• Is all equipment used in good working condition and inspected prior to entry?	"	"
• Are personnel properly clothed and equipped?	"	"

SECTION 2 – PRE-ENTRY CHECKS
(To be checked by each person entering the space)

	Yes	No
• I have received instructions or permission from the master or nominated responsible person to enter the enclosed space	"	"
• Section 1 of this permit has been satisfactorily completed by the master or nominated responsible person	"	"
• I have agreed and understand the communication procedures	"	"
• I have agreed upon a reporting interval of ..... minutes	"	"
• Emergency and evacuation procedures have been agreed and are understood	"	"
• I am aware that the space must be vacated immediately in the event of ventilation failure or if atmosphere tests show a change from agreed safe criteria	"	"

SECTION 3 – BREATHING APPARATUS AND OTHER EQUIPMENT
(To be checked jointly by the master or nominated responsible person and the person who is to enter the space)

	Yes	No
• Those entering the space are familiar with any breathing apparatus to be used	.....	.....
• The breathing apparatus has been tested as follows:		
- gauge and capacity of air supply	.....	.....
- low pressure audible alarm if fitted	.....	.....
- face mask – under positive pressure and not leaking	.....	.....
• The means of communication has been tested and emergency signals agreed	.....	.....
• All personnel entering the space have been provided with rescue harnesses and, where practicable, lifelines	.....	.....

Signed upon completion of sections 1, 2 and 3 by:

Master or nominated responsible person ..... Date ..... Time

Attendant ..... Date ..... Time

Person entering the space..... Date ..... Time

SECTION 4 – PERSONNEL ENTRY
(To be completed by the responsible person supervising entry)

Names .....

Time in ..... Time out .....

SECTION 5 – COMPLETION OF JOB
(To be completed by the responsible person supervising entry)

• Job completed	Date	Time .....
• Space secured against entry	Date	Time .....
• The officer of the watch has been duly informed	Date	Time.....

Signed upon completion of sections 4 and 5 by:

Responsible person supervising entry ..... Date ..... Time .....

THIS PERMIT IS RENDERED INVALID SHOULD VENTILATION OF THE SPACE STOP OR IF ANY OF THE CONDITIONS NOTED IN THE CHECKLIST CHANGE

Notes:

1 The permit should contain a clear indication as to its maximum period of validity.

2 In order to obtain a representative cross-section of the space's atmosphere, samples should be taken from several levels and through as many openings as possible. Ventilation should be stopped for about 10 minutes before the pre-entry atmosphere tests are taken.

3 Tests for specific toxic contaminants, such as benzene or hydrogen sulphide, should be undertaken depending on the nature of the previous contents of the space.

Annex 1.4 Inspections and Detentions per Flag State

Flag States on the Black List performed poorly during the CIC.

Antigua and Barbuda, Isle of Man, Panama, Russian Federation, Turkey, Ukraine and Vanuatu also rate above the average of 1.7%.

Though not CIC related, the results on detention percentages for several “white listed” flag States are also higher than expected.

Table Annex 1.4 Inspections and detentions per Flag State

Flag	# of inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections	WGB- list* 2013
Albania	5	0	0,0%	0	0,0%	Grey
Algeria	6	0	0,0%	0	0,0%	Grey
Antigua and Barbuda	220	13	5,9%	4	1,8%	White
Azerbaijan	3	0	0,0%	0	0,0%	Unlisted
Bahamas	148	2	1,4%	1	0,7%	White
Barbados	21	1	4,8%	0	0,0%	White
Belgium	12	0	0,0%	0	0,0%	White
Belize	23	0	0,0%	0	0,0%	Black
Bermuda (UK)	12	0	0,0%	0	0,0%	White
Bulgaria	2	0	0,0%	0	0,0%	Grey
Cambodia	26	3	11,5%	1	3,8%	Black
Canada	1	0	0,0%	0	0,0%	Unlisted
Cayman Islands (UK)	17	0	0,0%	0	0,0%	White
China	14	0	0,0%	0	0,0%	White
Comoros	13	3	23,1%	3	23,1%	Black
Congo	1	1	100,0%	0	0,0%	Unlisted
Congo, the Democratic Republic of the	1	0	0,0%	0	0,0%	Unlisted
Cook Islands	21	3	14,3%	1	4,8%	Black
Croatia	4	0	0,0%	0	0,0%	White
Curacao	12	0	0,0%	0	0,0%	Grey
Cyprus	141	2	1,4%	2	1,4%	White
Denmark	59	0	0,0%	0	0,0%	White
Egypt	2	0	0,0%	0	0,0%	Grey
Equatorial Guinea	1	0	0,0%	0	0,0%	Unlisted
Estonia	1	0	0,0%	0	0,0%	White
Falkland Islands (UK)	1	0	0,0%	0	0,0%	Unlisted
Faroe Islands	18	1	5,6%	0	0,0%	White
Finland	17	0	0,0%	0	0,0%	White
France	14	0	0,0%	0	0,0%	White
Georgia	1	0	0,0%	0	0,0%	Unlisted
Germany	38	0	0,0%	0	0,0%	White
Gibraltar (UK)	56	1	1,8%	0	0,0%	White
Greece	62	2	3,2%	1	1,6%	White
Hong Kong, China	143	4	2,8%	1	0,7%	White
India	9	0	0,0%	0	0,0%	White

Flag	# of inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections	WGB- list* 2013
Iran, Islamic Republic of	6	0	0,0%	0	0,0%	White
Ireland	4	0	0,0%	0	0,0%	White
Isle of Man (UK)	45	2	4,4%	1	2,2%	White
Israel	3	0	0,0%	0	0,0%	Unlisted
Italy	69	0	0,0%	0	0,0%	White
Jamaica	2	0	0,0%	0	0,0%	Unlisted
Japan	8	0	0,0%	0	0,0%	White
Kazakhstan	9	0	0,0%	0	0,0%	White
Korea, Republic of	5	0	0,0%	0	0,0%	White
Kuwait	4	0	0,0%	0	0,0%	Unlisted
Latvia	5	0	0,0%	0	0,0%	White
Lebanon	2	0	0,0%	0	0,0%	Grey
Liberia	309	7	2,3%	1	0,3%	White
Libya	2	1	50,0%	0	0,0%	Grey
Lithuania	5	1	20,0%	0	0,0%	Grey
Luxembourg	11	1	9,1%	0	0,0%	White
Malta	323	15	4,6%	3	0,9%	White
Marshall Islands	321	5	1,6%	1	0,3%	White
Moldova, Republic of	47	12	25,5%	6	12,8%	Black
Mongolia	1	0	0,0%	0	0,0%	Unlisted
Morocco	1	0	0,0%	0	0,0%	Grey
Netherlands	218	2	0,9%	0	0,0%	White
Norway	91	1	1,1%	0	0,0%	White
Palau	10	1	10,0%	1	10,0%	Unlisted
Panama	487	16	3,3%	9	1,8%	White
Philippines	13	0	0,0%	0	0,0%	White
Poland	7	0	0,0%	0	0,0%	Grey
Portugal	36	2	5,6%	0	0,0%	Grey
Russian Federation	80	8	10,0%	3	3,8%	White
Saint Kitts and Nevis	18	1	5,6%	0	0,0%	Grey
Saint Vincent and the Grenadines	45	5	11,1%	3	6,7%	Black
Sao Tome and Principe	1	0	0,0%	0	0,0%	Unlisted
Saudi Arabia	5	0	0,0%	0	0,0%	White
Sierra Leone	14	2	14,3%	1	7,1%	Black
Singapore	166	2	1,2%	1	0,6%	White
Spain	11	0	0,0%	0	0,0%	Grey
Sri Lanka	1	0	0,0%	0	0,0%	Unlisted
Sweden	18	0	0,0%	0	0,0%	White
Switzerland	11	0	0,0%	0	0,0%	White
Tanzania, United Republic of	11	1	9,1%	1	9,1%	Black
Thailand	7	0	0,0%	0	0,0%	Grey
Togo	17	2	11,8%	0	0,0%	Black
Tunisia	2	1	50,0%	0	0,0%	Grey
Turkey	96	8	8,3%	3	3,1%	White

Flag	# of inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections	WGB- list* 2013
Turkmenistan	1	0	0,0%	0	0,0%	Unlisted
Tuvalu	2	0	0,0%	0	0,0%	Grey
Ukraine	10	2	20,0%	2	20,0%	Grey
United Arab Emirates	2	0	0,0%	0	0,0%	Unlisted
United Kingdom	61	1	1,6%	0	0,0%	White
United States	12	1	8,3%	0	0,0%	White
Vanuatu	16	4	25,0%	3	18,8%	Grey

* The official WGB-list of the Paris MoU is published in the Annual Report. The scope of this table is only the CIC.

Annex 1.5 Inspections and detentions per Recognized Organization

The following table is part of the format as decided on by the Committee, however, none of the deficiencies in the CIC are RO related. The single deficiency recorded appears to be an error and should be investigated by the port State responsible for that inspection.

Table Annex 1.5 Inspections and detentions per Recognized Organization

Issuing authority	Inspection*	Detentions CIC-topic related with RO responsibility**
	502	
American Bureau of Shipping	270	
ASIA Classification Society	3	
Bulgarian Register of Shipping	20	
Bureau Veritas	408	
China Classification Society	43	
Columbus American Register	1	
Croatian Register of Shipping	6	
Det Norske Veritas	187	
DNV GL AS	460	
Dromon Bureau of Shipping	22	
Germanischer Lloyd	257	
Global Marine Bureau Inc.	3	
Guardian Bureau of Shipping	1	
Indian Register of Shipping	6	
Intermaritime Certification Services, ICS Class	8	
International Maritime Register	2	
International Naval Surveys Bureau	20	
International Register of Shipping	14	
International Ship Classification	1	
Iranian Classification Society	2	
Isthmus Bureau of Shipping, S.A.	8	
Korean Register of Shipping	60	
Lloyd's Register	394	
Maritime Bureau of Shipping	8	
Maritime Lloyd - Georgia	9	
Mediterranean Shipping Register	4	
National Shipping Adjuster Inc.	10	
Nippon Kaiji Kyokai	534	
Other	1	
Overseas Marine Certification Services	1	
Panama Marine Survey and Certification Services Inc.	1	
Panama Maritime Documentation Services	3	
Panama Register Corporation	1	

Issuing authority	Inspection*	Detentions CIC-topic related with RO responsibility**
	502	
Panama Shipping Registrar Inc.	2	
Phoenix Register of Shipping	6	
Polski Rejestr Statkow (Polish Register of Shipping)	7	
Register of Shipping (Albania)	2	
Registro Italiano Navale	86	
Russian Maritime Register of Shipping	177	1
Shipping Register of Ukraine	44	
Turkish Lloyd	3	
Venezuelan Register of Shipping	12	

* Number of inspections where the certificate is recorded as issued by the RO
** Number of inspections where the RO issued the certificate and a deficiency covered by that certificate was recorded as detainable and RO related