

**Report of the 2015 Concentrated Inspection Campaign (CIC)
on Crew Familiarity for Enclosed Space Entry**

Executive Summary

From 1st September 2015 to 30th November 2015, the BS MOU carried out a Concentrated Inspection Campaign (CIC) on Crew Familiarization for Enclosed Space Entry throughout the region. This campaign involved all member States of the BS MOU and was conducted in conjunction with the Tokyo MOU and Paris MOU. The Paris MOU Guidelines and Questionnaire were utilized.

During the campaign, a total of 1,022 inspections were carried out with the CIC questionnaire involving 1,022 individual ships. Of this quantity 49 ships were detained with 40.82% detentions were being within the CIC scope. This means that in 20 cases the ship's procedures and measures that are in place with respect to enclosed spaces entry are not in compliance with the requirements of SOLAS and had deficiencies, which were serious enough to detain the ship, resulting a CIC-topic related detention rate of 1.96 per cent.

A total of 253 non-conformities have been recorded as a direct result of this campaign. The overall number of CIC-topic related non-conformities per inspection was 0.25.

The requirements that reported the most favourable results related to the awareness of the crew members responsible for enclosed space entry of the associated risks Q8 (0.78%), and familiarity 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 Q3 (1.47 %).

The most notable non-conformities observed were lack of drill incompliance with the requirements of SOLAS Chapter III Q9 (14.35%), followed by lack of training manual complete in contents and customized to the ship Q5 (6.85%), and familiarity of the crew members responsible for enclosed space emergency duties with those duties Q4 (4.31%).

By ship type, container ships, ro-ro cargo ships, bulk carrier, followed by oil and chemical tanker ships reported the most favourable results.

General cargo ships, ro-ro cargo ships and livestock carrier ships, by far, reported the least favourable results. Although they constituted only 38.2% of all inspections, they accounted for 83.3% of detentions and 70.8% of the deficiencies. General dry cargo ships also had the highest number of detentions at 5 which amounts to a detention rate of 1.19%.

By ship age, ships under six years reported the most favourable results but the situation worsened as the age of ships increased.

13 (65.0%) of the ships detained for CIC-related deficiencies were general cargo/multipurpose ships, 3 (15.0%) were each bulk carriers and livestock carriers and also 1 (5.0%) of the ships was oil tanker.

Older ships, particularly those 30 years and older, also show reason for concern with majority of detentions 14 (70.0%) and deficiencies 97 (57.73%), although subjecting minority of inspections 281 (20.43%).

Additional information gathered on the measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter, and whether those ships crew members responsible for testing the atmosphere in enclosed spaces trained in the use of those equipment with 2 information only questions.

REPORT OF THE 2015 CONCENTRATED INSPECTION CAMPAIGN (CIC) ON CREW FAMILIRIZATION FOR ENCLOSED SPACE ENTRY

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1. INTRODUCTION

1.1 Purpose of the report

This report documents the results of the Concentrated Inspection Campaign (CIC) on Crew Familiarity for Enclosed Space Entry, which was carried out by 6 Member Authorities between September 1st and November 30th 2015.

The objective of this report is to analyse the results of this CIC on Crew Familiarization for Enclosed Space Entry. Results of the inspections without questionnaire are not included in the statistical analysis.

1.2 Objective of the CIC

The objective of the Campaign on the Crew Familiarity for Enclosed Space Entry was 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.

1.3 Scope of the CIC

The campaign targeted to verify that verification of the ship's procedures and measures that are in place with respect to enclosed spaces for compliance with the requirements of SOLAS and STCW conventions as applicable. CIC carried out during a regular Port State Control inspection conducted under the regional ship targeting and inspection system within the BS MOU region. Additional information gathered on the measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter, and whether those ships crew members responsible for testing the atmosphere in enclosed spaces trained in the use of those equipment with 2 information only questions.

1.4 General remarks

This report presents analysis of the responses to the CIC Questionnaire submitted during the campaign period. Thereby for the purpose of this report:

- Inspection is an inspection with a CIC Questionnaire with applicable response.
- Deficiency indicates an non-conformity which is represented by an un-satisfactory "NO" response to the questions 3-9 and does not necessarily represents recorded deficiencies in the inspection reports, but compliance to the requirements as set out in the questionnaire;
- Except **Table 1**, the tables do not take into account inspections where the CIC questionnaire was not recorded; and
- Detention is a CIC-topic related detention which is indicated by a "YES" response to the Question 10.

Responses to the information only questions (Questions 1-2) are analysed separately.

2 SUMMARY ANALYSIS, CONCLUSIONS AND RECOMMENDATIONS

2.1 Summary analysis

During the campaign, a total of 1,022 inspections were carried out with the CIC questionnaire involving 1,022 individual ships. Only one CIC inspection has been carried out on board of an individual vessel.

Analysis of the results of the CIC revealed the following:

- .1 49 ships were detained, in which 40.82% of them were CIC-topic related which means that in 20 cases the Crew Familiarity for Enclosed Space Entry had deficiencies, which were serious enough to detain the ship resulting a CIC-topic related detention rate of 1.96%.
- .2 A total of 253 deficiencies have been recorded as a direct result of this campaign. The overall number of CIC-topic related deficiencies per inspection was 0.25.
- .3 The requirements that reported the most favourable results related to the awareness of the crew members responsible for enclosed space entry of the associated risks Q8 (0.78%), and familiarity 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 Q3 (1.47 %).
- .4 The requirements that reported the least favourable results related to lack of lack of drill incompliance with the requirements of SOLAS Chapter III Q9 (14.35%), followed by lack of training manual complete in contents and customized to the ship Q5 (6.85%), and familiarity of the crew members responsible for enclosed space emergency duties with those duties Q4 (4.83%).
- .5 By ship type, container ships, ro-ro cargo ships, bulk carrier, followed by oil and chemical tanker ships reported the most favourable results.
- .6 General cargo ships, ro-ro cargo ships and livestock carrier ships, by far, reported the least favourable results. Although they constituted only 38.2% of all inspections, they accounted for 83.3% of detentions and 70.8% of the deficiencies. General dry cargo ships also had the highest number of detentions at 5 which amounts to a detention rate of 1.19%.
- .7 By ship age, ships under six years reported the most favourable results but the situation worsened as the age of ships increased.
- .8 Older ships, particularly those 30 years and older, reported the least favourable results. Although they comprised only 20.43% of all inspections, they accounted for 70% of total detentions and 57.74% of deficiencies
- .9 A total of 14 flags had CIC-related detention. These flags cover 52.87% of the inspections. The flags, with the highest CIC-related detention rate were St. Kitts Lewis (15.38%); and St. Vincent and Grenadines (14.29%), Moldova (10.71%), Tanzania (8.33%) which cover 6.55% of the total number of CIC inspections and 40.0% CIC-topic related detentions.
- .10 A total of 40 flags, covering 44.13% of the CIC inspections, had no CIC-related detentions at all.
- .11 A total of 22 flags, covering 3.72% of the total CIC inspections, had no CIC-related deficiencies.
- .12 When compared by ship flag, Hong Kong (China) and Liberia followed by Malta together with Singapore showed best results because having no detentions with more than 30 inspections with lower deficiency index levels or rates.

- .13 Breakdown of major non-conformities as indicated by “NO” responses have been studied by ship flag, ship type and ship age presented in **Section 3.7**
- .14 Detailed analyses of the information only questions presented in **Section 3.8**.

2.2 Conclusions

Reflecting on the objective of the CIC, i.e. to provide indications as to the level of compliance with vital points of the measures that are in place with respect to enclosed spaces, it can be concluded from the above results that although the level of compliance with the provisions of SOLAS and STCW is reasonably good, attention to be given to the reported non-conformities in particular unsatisfactory drills.

2.3 Recommendations

- .1 Industry to put emphasis on the vital requirements of the SOLAS chapter III on the crew familiarity for the enclosed space entry in general, development and implementation of a training and familiarization program in order crew members involved are trained conducting operation in entry into enclosed space safely.
 - a. Notice of the training and familiarization, knowledge of the crew on the associated risk by hazard/risk by properly planned entry and rescue drills (Q9) and
 - b. Ensure :
 - i. availability of the training manual in proper content and customized ship (Q5);
 - ii. crew members responsible for enclosed space emergency duties familiar with those duties (Q4)
- .2 Breakdown of major non-compliant requirements as set out question 9 (entry and rescue drills), Question 5 and Question 4 by ship type, ship age and ship flag are presented in **Section 3.7** of the report. Concerned flag States Authorities might be invited to take note of the observations and take appropriate actions. Older ships pose a risk in the area of entry into enclosed.

3 ANALYSIS

3.1 General

The total number of ships inspected and the total number of inspections performed during the CIC are presented in **Table 1**.

Table 1 Summary of inspections during the CIC

	No. of individual ships with CIC Questionnaire	No. of inspections with a CIC questionnaire	No. of initial inspections without CIC questionnaire
Total	1,022	1,022	154
Total number of detentions	49	49	11
Detentions with CIC-topic deficiencies	20	20	0

Looking at the number of inspections performed with a CIC questionnaire (Column 2&3 of Table 1), there is 49 detentions during CIC inspections and 20 (40.82 %) of these detentions were CIC topic related. Questionnaire submission rate was high e.g. 86.9% which around ninth out of ten initial inspections were accompanied with a CIC questionnaire.

Table 1 also illustrates that all individual ships that were involved with this CIC underwent only one CIC inspection. Thereby number of individual ship inspected for CIC are not incorporated in the inspection and detention data presented in this report.

3.2 Analysis of the response to the CIC questionnaire

Table 2 presents responses to the information questions. It reveals that majority of the vessel have measures, only 2.6% of those ships crew members responsible for testing the atmosphere in enclosed spaces are not trained in the use of those equipment's. Further analysis of the responses to the information questions are presented in **Section 3.8**.

Table 3 presents response to the CIC questionnaire. In order to analyse results on an individual question basis all Not Applicable (N/A) responses are filtered and total relevant/applicable responses compliance to the requirement presented in the last three column of the **Table 3** indicates that the most unfavourable results are question 9, 5 and 4.

Table 2 Responses to the Information Questions on CIC Questionnaire ⁽¹⁾

No.	Information Questions	YES	NO	N/A	Total No. of applicable responses	Applicable responses	
		No.	No.	No.		YES %	NO %
1	Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?	1009	13		1022	98.73	1.27
2	Are crew members responsible for testing the atmosphere in enclosed spaces trained in the use of the equipment referred to in Question 1?	978	26	18	1004	97.41	2.59

Table 3 Responses CIC Questions on CIC Questionnaire ⁽¹⁾

No.	CIC Questions	YES	NO	N/A	Total No. of applicable responses	Compliance	
		No.	No.	No.		YES %	NO %
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?	1007	15		1022	98.53	1.47
4	Are crew members responsible for enclosed space emergency duties familiar with those duties?	978	44		1022	95.69	4.31
5	Is the training manual available on board and its contents complete and customized to the ship?	952	70		1022	93.15	6.85
6	Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III, Regulation 19.3?	1000	22		1022	97.85	2.15
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?	996	26		1022	97.46	2.54
8	Are crew members responsible for enclosed space entry aware of the associated risks?	1014	8		1022	99.22	0.78
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?	406	68	548	474	85.65	14.35
	TOTAL	6353	253	548	6606	96.17	3.83
10	Is the ship detained as a result of a "NO" answer to any of the questions 3-9 above ?	20	1002		1022	1.96	98.04

⁽¹⁾Includes Bulgaria and Romania data which are submitted also to the Paris MOU, Russian Federation and Turkey data includes only Black Sea ports

Breakdown of the major non-conformities by flag, ship type and ship age are presented in **Section 3.8**.

The CIC questionnaire indicates that “unsatisfactory” answer was given to a question on 3.83 % of occasions. Number of yes responses to the Question 10 coincides with the recorded CIC topic related detentions as a result of a “NO” answer to any of the questions (3-9) set out in the questionnaire.

Analysis of the responses to the CIC questionnaire by ship type, ship flag and ship age are presented in the following sections.

3.3 Analyses by ship types

A breakdown of the results by type of ship subject to the CIC including the number of inspections, detentions, deficiencies presented in **Table 4** below.

When considering the breakdown of ships inspected by ship type largest group of the ship inspected during campaign period were bulk carriers with 373 (36.49%) inspections followed by general cargo/multi-purpose ships with 354 (34.64%) inspections, oil tankers with 125 (12.23%) inspections and chemical tankers with 78 (7.63%) inspections.

Table 4 Results by ship type

Type of ship	Inspections	Detentions	Deficiencies	Detention %	Deficiency Rate x100
Bulk carrier	373	3	51	0.80	13.67
Chemical tanker	78	0	14		17.95
Container	28	0	1		3.57
Gas carrier	14	0	6		42.86
General cargo/multipurpose	354	13	137	3.67	38.70
Livestock carrier	9	3	15	33.33	166.67
Oil tanker	125	1	24	0.80	19.20
Ro-Ro cargo	14	0	1		7.14
Other types of ships	27	0	4		14.81
TOTAL	1022	20	253	1.96	24.76

13 (65.0%) of the ships detained for CIC-related deficiencies were general cargo/multipurpose ships, 3 (15.0%) were each bulk carriers and livestock carriers and also 1 (5.0%) of the ships detained was oil tanker.

Majority of deficiencies observed were general cargo/multi-purpose ship 137 (54.15%), bulk carriers 51 (20.16%), and oil tankers 24 (9.48%). Although they constituted only 83.36% of all inspections, they accounted for 85.0% of CIC-topic related detentions and 83.79% of CIC related deficiencies.

Livestock carrier ships, gas carriers and general cargo ships by far reported the least favourable results. Although they constituted only 36.9% of all inspections, they accounted for 83.3% of detentions and 70.8% of the deficiencies. General dry cargo ships also had the highest number of detentions at 13 which amount to a detention rate per inspection of 3.67%.

3.4 Analyses by ship age

The following **Table 5** presents the results of the CIC by ship age. It shows the number of inspections, detentions, deficiencies by ship age, as well as statistical analyses of this figures and detention performance by ship age.

Table 5 indicates that the older ship, particularly those which are 30 years and older raise most concern in regard to their level of compliance with the SOLAS and STCW requirements related to

the enclosed space entry. Ships 30-35 years of age had the highest detention percentage of 7.55%, followed by ships over 35 years age with detention percentage of 5.88%.

Older ships, particularly those 30 years and older, reported the least favourable results. Although they comprised only 20.43% of all inspections, they accounted for 70% of total detentions and 57.74% of deficiencies. Ships over 35 years age with detention percentage of 5.88%.

Ships older than 24 years have majority of the deficiencies 146 (57.7%) having only 25.7 per cent of the inspections.

Table 5 Results by ship age

Age of ships	Inspections	Detentions	Deficiencies	Detention %	Deficiency Ratex100
0-5	200	1	30	0.50	15.00
6-10	224	1	24	0.45	10.71
11-15	160	1	30	0.63	18.75
16-20	122	1	15	0.82	12.30
21-24	53	1	8	1.89	15.09
25-29	55	1	16	1.82	29.09
30-34	106	8	59	7.55	55.66
35+	102	6	71	5.88	69.61
Total	1022	20	253	1.96	24.76

3.5 Analyses by ship flag

The following **Table 6** presents the results of the CIC by ship flag. It shows the number of inspections, detention, deficiencies by ship flag.

A total of 1.022 ships from 54 flag administration inspected during the campaign. A total of 14 flags had CIC-related detentions. These flags cover 55.87% of the CIC inspections. The flags, with the highest CIC-related detention rate were St. Kitts Lewis (15.38%); and St. Vincent and Grenadines (14.29%), Moldova (10.71%), Tanzania (8.33%) which cover 6.55% of the total number of CIC inspections and 40.0% CIC-topic related detentions.

A total of 40 flags, covering 44.13% of the CIC inspections, had no CIC-related detentions at all. A total of 22 flags, covering 3.72% of the total CIC inspections, had no CIC-related deficiencies.

Table 6 Results by ship Flag

Ship Flag	Inspections	Detentions	Deficiencies	Detention %	Deficiency Ratex100
Bahamas	24	1	6	4.17	25.00
Cambodia	23	1	13	4.35	56.52
Isle of Man (GB)	8	1	4	12.50	50.00
Malta	124	1	16	0.81	12.90
Marshall Islands	100	1	19	1.00	19.00
Moldova, Republic of	28	3	19	10.71	67.86
Palau	5	1	4	20.00	80.00
Panama	151	2	30	1.32	19.87
Russian Federation	50	2	28	4.00	56.00
Saint Kitts and Nevis	13	2	20	15.38	153.85
Saint Vincent and the Grenadines	14	2	7	14.29	50.00
Sierra Leone	13	1	9	7.69	69.23
Tanzania, United Republic of	12	1	6	8.33	50.00
Ukraine	6	1	4	16.67	66.67
Other	451	0	68	0.00	15.08
TOTAL	1022	20	253	1.96	24.76

When compared by ship flag with more than 30 inspections Hong Kong (China) and Liberia followed by Malta and Singapore showed best results because having no detentions with very low deficiency per inspection.

3.6 Analyses of by ship risk group

The following **Table 7** presents the results of the CIC by ship flag. It shows the number of inspections, detentions, deficiencies by ship risk.

Majority of the ships subjected for CIC inspection were High risk group, 622 (60.9%). Detention and non-compliance rates increases as ship risk group increases. Non-complaint drill rate of very high ship risk group is almost double of the low and the medium ship risk group.

Table 7 Result by ship risk group

SHIP RISK GROUP	No. of CIC inspections	No. of CIC topic related detentions	No. of un-satisfactory responses CIC Questions 3-9	CIC topic related detention%	Unsatisfactory responses rate	No. of Drills	No. of non-compliant drills	Non-compliant drill %
VERY HIGH	29	4	32	13.79	1.10	21	5	23.8
HIGH	622	15	169	2.41	0.27	304	46	15.1
MEDIUM	268	1	38	0.37	0.14	104	12	11.5
LOW	103	0	14	0.00	0.14	45	5	11.1
TOTAL	1022	20	253	1.96	0.25	474	68	14.35

3.7 Analyses of the major non-compliances

Major non compliances are Question 9 with 14.35%; Question 5 with 6.81% and Question 4 with 4.31% non-compliance.

In this part of the report breakdown of the major non-compliances by ship flag, ship type and ship age are presented for Questions 9, 5 and 4.

Question 9 which asked whether the drill observed on the enclosed space entry comply with the requirements of SOLAS Chapter III Regulation 9.3.6 recorded the highest per cent of non-compliances. Out of 548 drills 68 (14.35 %) were not complied Breakdown of the compliance of the drills on the enclosed space entry and rescue drills to the **Question 9** by ship flag, ship type and ship age are presented below.

Table 8 Breakdown of the un-satisfactory responses to the Question 9 (drills) by ship flag

Ship Flag	Inspections	Number of Drills observed	% of CIC inspections	Number of non-compliant drills	Non-compliant drill %
Bahamas	24	11	45.8	2	18.2
Cambodia	23	19	82.6	3	15.8
Isle of Man (GB)	8	4	50.0	1	25.0
Malta	124	51	41.1	8	15.7
Marshall Islands	100	41	41.0	6	14.6
Moldova, Republic of	28	20	71.4	4	20.0
Panama	151	65	43.0	8	12.3
Russian Federation	50	40	80.0	7	17.5
Saint Kitts and Nevis	13	9	69.2	4	44.4
Saint Vincent & the Grenadines	14	7	50.0	2	28.6
Sierra Leone	13	6	46.2	1	16.7
Tanzania, United Republic of	12	8	66.7	1	12.5
Ukraine	6	5	83.3	1	20.0
Other	456	188	41.2	20	10.6
TOTAL	1022	474	46.4	68	14.35

Table 9 Breakdown of the un-satisfactory responses to the Question 9 (drills) by ship type

Ship Type	Inspections	No. Drills	% of CIC inspections	No. of non-compliant drills	Non-compliant drill %
Bulk carrier	373	128	34.32	16	12.50
Chemical tanker	78	34	43.59	11	32.35
Gas carrier	14	8	57.14	4	50.00
General cargo/multipurpose	354	216	61.02	22	10.19
Livestock carrier	9	8	88.89	3	37.50
Oil tanker	125	45	36.00	12	26.67
Other types of ships	69	35	50.72	0	0.00
TOTAL	1022	474	46.38	68	14.35

28 (41.2%) of the non-compliant drills observed on board general cargo multi purpose and bulk carrier with lower non-compliant drill percentage of 10.2% and 12.5%. Gas carriers followed by livestock carrier have higher non-compliant drills percentages of 50.0% and 37.5%.

Table 10 Breakdown of the un-satisfactory responses to the Question 9 (drills) by ship age

Ship Age	Inspections	No. of Drills observed	% of CIC inspections	No. of non-compliant drills	Non-compliant drill %
0-5	200	86	43.0	16	20.5
6-10	224	85	37.9	10	12.9
11-15	160	61	38.1	14	25.2
16-20	122	39	32.0	3	5.2
21-24	53	28	52.8	1	3.9
25-29	55	35	63.6	1	3.1
30-34	106	68	64.2	10	16.2
35+	102	72	70.6	13	19.9
Total	1022	474	46.38	68	14.35

Younger ships 15 years and younger with 232 (48.95 %) of total drills with 17.24 non-compliant drill percentage, and older ships 30 years and older with 140 (29.54%) of total drills with 16.43 non-compliant drill percentage raise concern. Ships 16-29 years old with 102 (21.52%) of total drills with 4.90 non-compliant drill percentage performing well.

Question 5 was asked for a training manual available on board and its contents complete and customized to the ship, recorded second non-compliant percentage of the responses. Of the 1022 70 (6.85%) responses were unsatisfactory.

Breakdown of the compliance to the **Question 5** by ship flag, ship type and ship age are presented below.

20 (28.6%) of unsatisfactory responses to the Question 5 observed on board of ships flying flag of Cook Islands, Liberia and Togo which cover 11.4 per cent of the questionnaire submitted.

Table 11 Breakdown of the un-satisfactory responses to the **Question 5** by ship flag

Ship Flag	Inspections	Deficiencies	% of total	Deficiency Ratex100
Bahamas	24	1	1.4	4.2
Cambodia	23	1	1.4	4.3
Cook Islands	20	7	10.0	35.0
Greece	28	3	4.3	10.7
Liberia	81	8	11.4	9.9
Malta	124	1	1.4	0.8
Marshall Islands	100	2	2.9	2.0
Moldova, Republic of	28	1	1.4	3.6
Panama	151	1	1.4	0.7
Russian Federation	50	4	5.7	8.0
Togo	16	5	7.1	31.3
Turkey	93	2	2.9	2.2
Others	284	34	48.6	12.0
TOTAL	1022	70	100.0	6.85

Table 12 Breakdown of the un-satisfactory responses to the **Question 5** by ship type

Ship Type	Inspections	Deficiencies	% of total	Deficiency ratex100
Bulk carrier	373	18	25.7	4.8
Chemical tanker	78	2	2.9	2.6
Container	28	1	1.4	3.6
Gas carrier	14	1	1.4	7.1
General cargo/multipurpose	354	38	54.3	10.7
Oil tanker	125	5	7.1	4.0
Ro-Ro cargo	14	1	1.4	7.1
Other type of ships	36	4	5.7	11.1
Total	1022	70	100.0	6.85

Table 13 Breakdown of the un-satisfactory responses to the **Question 5** by ship age

SHIP AGE	Inspections	Deficiency	% of total	Deficiency Ratex100
0-5	200	6	8.6	3.0
6-10	224	9	12.9	4.0
11-15	160	4	5.7	2.5
16-20	122	6	8.6	4.9
21-24	53	3	4.3	5.7
25-29	55	9	12.9	16.4
30-34	106	18	25.7	17.0
35+	102	15	21.4	14.7
Totals	1022	70	100.0	6.85

18 (90%) of unsatisfactory responses to this questions observed on board ships over 20 years an old records related to crew familiarity for enclosed space entry being recorded correctly on board younger ships.

The results for **Question 4** which asked for whether crew members responsible for enclosed space emergency duties familiar with those duties also raises concern and account for the third highest number of unsatisfactory results in this area which represent 4.31% of inspections. Breakdown of the compliance to the **Question 4** by ship flag, ship type and ship age are presented below:

Table 14 Breakdown of the un-satisfactory responses to the **Question 4** by ship flag

Ship Flag	Inspections	Deficiencies	% of total	Deficiency Rate x100
Bahamas	24	1	2.3	24.0
Cambodia	23	1	2.3	23.0
Malta	124	3	6.8	124.0
Marshall Islands	100	3	6.8	100.0
Moldova, Republic of	28	6	13.6	28.0
Panama	151	2	4.5	151.0
Russian Federation	50	7	15.9	50.0
Togo	16	2	4.5	16.0
Turkey	93	4	9.1	93.0
Others	413	15	34.1	3.6
Total	1022	44	100.0	4.31

Table 15 Breakdown of the un-satisfactory responses to the **Question 4** by ship type

Ship Type	Inspections	Deficiencies	% of total	Deficiency rate x100
Bulk carrier	273	8	18.2	2.9
Container	354	14	31.8	4.0
Heavy load	122	3	6.8	2.5
Others	273	19	43.2	7.0
Totals	1022	44	100.0	4.31

25 (56.8%) of the totals by three ship types 749 (73.3%) total questionnaire submitted container ships has higher percentage of non-compliance.

Table 16 Breakdown of the un-satisfactory responses to the **Question 4** by ship age

Ship Age	Inspections	Deficiencies	% of total	Deficiency rate x100
0-5	200	3	6.8	1.5
6-10	224	2	4.5	0.9
11-15	160	4	9.1	2.5
16-20	122	4	9.1	3.3
21-24	53	1	2.3	1.9
25-29	55	5	11.4	9.1
30-34	106	11	25.0	10.4
35+	102	14	31.8	13.7
Totals	1022	44	100.0	4.31

30 (68.2%) of the total noncompliance by ships older than 25 years 263 (25.73%) of inspections, Non-compliance rate increases as the ship age get older.

3.8 Analyses of the information questions

Responses to the information questions are presented in this section by ship type, ship age, ship flag and by ship risk groups for the information questions of 1 and 2 below

Table 17 Responses to the information questions by ship type

Ship Type	Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?			Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?		
	No. of Appl. responses	No. of "NO" Responses	Non-compliant %	No. of Appl. Responses	No. of "NO" Responses	Non-compliant %
Bulk carrier	373	1	0.3	370	2	0.5
Chemical tanker	78	0	0.0	76	0	0.0
Container	28	0	0.0	28	0	0.0
Gas carrier	14	0	0.0	14	0	0.0
General cargo/multipurpose	354	8	2.3	347	20	5.8
Livestock carrier	9	0	0.0	9	1	11.1
Offshore supply	2	0	0.0	2	0	0.0
Oil tanker	125	2	1.6	125	1	0.8
Other special activities	9	0	0.0	8	0	0.0
Passenger ship	5	0	0.0	5	0	0.0
Refrigerated cargo	2	0	0.0	2	0	0.0
Ro-Ro cargo	14	1	7.1	13	2	15.4
Ro-Ro passenger ship	5	1	20.0	2	0	0.0
Special purpose ship	1	0	0.0	1	0	0.0
Tugboat	2	0	0.0	1	0	0.0
Vehicle carrier	1	0	0.0	1	0	0.0
TOTAL	1022	13	1.27	1004	26	2.59

Table 18 Responses to the information questions by ship age

Ship Age	Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?			Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?		
	No. of Applicable responses	No. of "NO" Responses	Non-compliant %	No. of Applicable responses	No. of "NO" Responses	Non-compliant %
0-5	200	0	0.0	198	1	0.5
6-10	224	0	0.0	222	0	0.0
11-15	160	1	0.6	160	0	0.0
16-20	122	1	0.8	119	4	3.4
21-24	53	1	1.9	53	3	5.7
25-29	55	1	1.8	54	2	3.7
30-34	106	4	3.8	103	5	4.9
35+	102	5	4.9	95	11	11.6
Total	1022	13	1.27	1004	26	2.59

Table 19 Responses to the information questions by ship flag

Ship Flag	Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?			Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?		
	No. of Appl. reposes	No. of "NO" Responses	Non-compliant %	No. of Appl. responses	No. of "NO" Responses	Non-compliant %
Cambodia	23	2	8.7	20	1	5.0
Comoros	11	1	9.1	10	1	10.0
Cook Islands	20	1	5.0	20	2	10.0
Gibraltar (GB)	1	0	0.0	1	0	0.0
Malta	124	0	0.0	122	2	1.6
Marshall Islands	100	0	0.0	100	1	1.0
Moldova. Republic of	28	0	0.0	28	3	10.7
Isle of Man (GB)	8	1	12.5	8	0	0.0
Netherlands	14	0	0.0	14	1	7.1
Palau	5	1	20.0	3	1	33.3
Panama	151	3	2.0	149	4	2.7
Russian Federation	50	1	2.0	50	5	10.0
Saint Kitts and Nevis	13	1	7.7	13	2	15.4
Sierra Leone	13	1	7.7	12	1	8.3
Tanzania. United Republic of	12	1	8.3	11	0	0.0
Vanuatu	10	0	0.0	10	2	20.0
Other	439	0	0.0	433	0	0.0
TOTAL	1022	13	1.27	1004	26	2.59

Table 20 Responses to the information questions by ship risk groups

SHIP RISK GROUP	Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?			Q1: Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?		
	No. of Applicable responses	No. of "NO" Responses	Non-compliant %	No. of Applicable responses	No. of "NO" Responses	Non-compliant %
VERY HIGH	29	3	10.3	25	2	8.0
HIGH	622	10	1.6	610	23	3.8
MEDIUM	268	0	0.0	267	1	0.4
LOW	103	0	0.0	102	0	0.0
TOTAL	1022	13	1.27	1004	26	2.59