Report of the 2012 Concentrated Inspection Campaign (CIC) on Fire Safety Systems

November, 2013

Executive Summary

The Tokyo MOU on Port State Control (TMOU) carried out a joint Concentrated Inspection Campaign (CIC) with the Paris MOU on Port State Control (PMOU) on fire safety systems between September 1 and November 30, 2012. During the campaign, 17 TMOU and 27 PMOU member states focussed on compliance with SOLAS Chapter II-2 requirements on inspected ships. This report documents the results of the campaign for the TMOU Maritime Authorities. Results for the PMOU Maritime Authorities are documented separately.

A total of 8,274 inspections were carried out during the CIC involving 7,449 individual ships. Of these, 6,606 inspections were conducted with a CIC questionnaire (80%). The overall detention rate for inspections conducted with a questionnaire was 3.3% (217 ships were detained). The CIC-topic detention rate was 2.3% (150 ships were detained). 69% of the detentions were CIC-topic related.

Considering both the questionnaire and deficiency data, the most positive results were reported for Question 7, which asked whether a test of the sprinkler system triggers an automatic visual and audible alarm for the section. The least favourable results were reported for Question 3, which asked if portable extinguishers were ready for use in locations as per the fire plan, and Question 5a, which asked if fire protection systems, fire fighting systems and appliances were maintained ready for use.

Offshore supply ships had the highest CIC-topic related detention rate (5.7%), followed by Ro-Ro passenger ships (4%) and general cargo/multipurpose ships (3.8%). A number of ship types had "zero" CIC-topic related detentions. Younger ships had the lowest detention rate (1%) and older ships the highest detention rate (6%). The rate increased steadily from ships less than 11 years old to ships over 30 years old.

Ships from 86 flag states were inspected during the CIC. The flag state with the highest detention rate (CIC-topic related) was Equatorial Guinea (50%). 53 of the 86 flag states (63%) did not have any detentions. The overall results of ship detentions was consistent with the risk profiling methodology of the TMOU – very high risk ships comprised (by far) the largest percentage of ships detained per inspection.

Of the TMOU member states, China by far conducted the most inspections (2,099), followed by Japan (1,587), Korea, Republic of (798) and Indonesia (676). The least number of inspections were conducted by Fiji (8) followed by Papua New Guinea (27).

The objective of the CIC was to provide indications as to the industry's level of compliance with specific aspects of SOLAS Chapter II-2 on Fire Protection, Fire Detection and Fire Extinction arrangements vessels regardless of type. New provisions were introduced in July 2002 and deficiencies related to fire safety account for 14% of total deficiencies with the Paris and Tokyo MOU.

The TMOU concludes that the CIC has indeed provided sound evidence supporting that the industry has in general achieved a good level of compliance with the specific provisions of SOLAS Chapter II-2 pertaining to fire safety systems. Despite the fact 69% of the detentions were CIC-topic related, when the overall CIC-topic related detention rate is compared to the broader TMOU PSC rate that was published in the 2011 Annual Report on Port State Control, the results are highly favourable – the CIC-related detention rate is less than half that of the broader TMOU PSC rate.

Key recommendations pertain to the TMOU continuing, during normal PSC inspections, to put emphasis on the Chapter II-02 requirements that had the least favourable results of the CIC, and continuing to reduce the inconsistencies between the questionnaire and deficiency data by emphasizing the importance of properly completing CIC documentation during training sessions.

Table of Contents

Page

Section 1: Introduction

1.1 Purpose of this Report 4
1.2 Objective of the CIC 4
1.3 Scope of the CIC 4
1.4 General Remarks 5

Section 2: Summary Analysis, Conclusions and Recommendations

2.1 Summary Analysis 5
2.2 Conclusions 7
2.3 Recommendations 7

Section 3: CIC Questionnaire Results

3.1 Analysis 8
3.1.1 Response to CIC Questionnaire **8**
3.1.2 Analysis of Answers to Questionnaire **10**
3.1.3 Number of Inspections and Number of Ships in CIC **10**
3.1.4 Specification of CIC-Topic Related Deficiencies **12**
3.1.5 Analysis of CIC-topic Related Deficiencies (ISM-Related Deficiencies) **14**
3.1.6 Number of Ships to Number of Inspections in CIC **15**
3.1.7 Number of Inspected Ships per Risk Profile **15**
3.1.8 Number of Inspected Ships and Detentions per Ship Type **17**
3.1.9 Number of Inspected Ships and Detentions per Flag State **18**
3.1.10 Number of Inspections and Detentions per Recognized Organization **19**
3.1.11 Ship Age Overview **19**
3.2 Results on Former CIC on Same Subject 19
3.3 Results Other CIC Participants 20

Annex 1: CIC Questionnaire

Annex 1.1 Inspection Form of CIC 22
Annex 1.2 Table - Inspections and Detentions per Flag State 23
Annex 1.3 Table Inspections and Detentions Per Recognized Organization 27

Introduction

1.1 Purpose of this Report

This report documents the results of the Concentrated Inspection Campaign (CIC) on Fire Safety Systems (SOLAS CH II-2) which was carried out by 17 member Maritime Authorities of the Tokyo Memoranda of Understanding (MOU) on Port State Control between September 1 and November 30, 2012. The CIC was carried out jointly by the Paris MOU on Port State Control which involved 27 additional Maritime Authorities (44 in total). CIC results for the Paris MOU are documented in a separate report; however, a summary comparison between the Tokyo and Paris MOU results is provided in Section 3.3 of this report.

1.2 Objective of the CIC

The SOLAS Convention specifies minimum standards for the construction, equipment and operation of ships, compatible with their safety. Ch II-2 relates to Construction - Fire Protection, Fire Detection, and Fire Extinction arrangements on board ships and includes detailed fire safety provisions for all ships and specific measures for passenger ships, cargo ships and tankers.

Revised SOLAS Chapter II-2 adopted by IMO Resolution MSC .99(73) entered into force on 1 July 2002 and generally applies to ships constructed on or after 1 July 2002. However, some regulations of the revised SOLAS Chapter II-2 apply to all ships (including ships constructed before 1 July 2012 - existing ships). Applicable requirements to existing ships are outlined in paragraph 2 of Regulation 1 of revised SOLAS Chapter II-2.

Principles of the updated provisions include:

- Division of the ship into main and vertical zones by thermal and structural boundaries;
- Separation of accommodation spaces from the remainder of the ship by thermal and structural boundaries;
- Restricted use of combustible materials;
- Detection of any fire in the zone of origin;
- Containment and extinction of any fire in the space of origin;
- Protection of the means of escape or of access for fire-fighting purposes;
- Ready availability of fire-extinguishing appliances; and,
- Minimization of the possibility of ignition of flammable cargo vapour.

The objective of the CIC was to provide indications as to the industry's level of compliance with specific aspects of SOLAS Chapter II-2 on Fire Protection, Fire Detection and Fire Extinction arrangements on board ships regardless of type. It was also intended to help raise awareness of fire safety related issues. Deficiencies related to fire safety account for 14% of total deficiencies with the Paris and Tokyo MOU and a CIC on the fire safety systems of all types of ships has never been done.

1.3 Scope of the CIC

The CIC targeted 12 aspects of compliance provisions that are considered critical to shipboard fire safety systems. Areas include:

- Compliance with the requirements of the SOLAS convention for fire safety systems;
- Ensuring fire fighting equipment is readily available and maintained at all times; and,
- Ensuring the master, officers and crew are familiar with FSS equipment and have received training in carrying out their duties.

The CIC was designed to examine specific areas and not intended to detract from the normal coverage of Port State Control Inspections. As such, it was conducted in conjunction with the regular Port State Control targeting and inspection activities.

Member Maritime Authorities were provided with a standardized questionnaire format to record and report their results against the 12 targeted compliance provisions that comprised the CIC. In addition, Port State Control Officers (PSCOs) were required to indicate if the ship was detained as a result of the CIC. The questionnaire required a "Yes" (Satisfactory) or "No" (Unsatisfactory) response to each question. In some cases a "N/A" (Not Applicable) answer was acceptable. For each "No" answer, participants were directed to document the deficiency using the appropriate deficiency code on Form B of the PSC inspection report. For six of the questions, a "No" answer was serious enough that the ship could be considered for detention.

1.4 General Remarks

General remarks pertaining to this report include:

- For the purpose of this report, a detention is an inspection containing at least one deficiency that is considered a ground for detention.
- Except for Table 2, the tables contained in this report take into account the total number of inspections conducted during the CIC - those conducted with a CIC questionnaire and those conducted without. As such, the detention rates that comprise the analysis relate to the total number of inspections, not just those that were conducted with a CIC questionnaire. In order to facilitate comparison with the CIC results from the PMOU, an additional row has been added to each table (as appropriate) which reports separately (summary results only) the number of inspections which were conducted with CIC questionnaires and the associated detention rates.

Summary, Conclusions and Recommendations

2.1 Summary

The following summarizes the results of the CIC:

- 7,449 individual ships and a total of 8,274 inspections were conducted during the CIC. Of these, 6,606 inspections were conducted with a CIC questionnaire (80%).

- Of the ship inspections conducted with a CIC questionnaire, 217 ships were detained of which 150 or 69% were CIC-topic related. The overall detention rate of ships inspected with a CIC questionnaire (percentage of detentions per inspection) was 3.3%. The CIC-topic related detention rate was 2.3%.

- Responses to Question 4, which asked does the test of automatic audible alarm sound prior to release of a fixed gas fire-extinguishing medium into spaces in which personnel normally work, reported the most favourable results of all questions – only 93 unsatisfactory responses were recorded representing 1.4% of inspections.

- The least favourable results were reported for Question 5a, which asked if fire protection systems, fire fighting systems and appliances were maintained ready for use – 724 unsatisfactory responses were recorded representing 11% of inspections. An unsatisfactory response to Question 5a was a potentially detainable violation.

- Deficiency 07110 (related to Question 3), which pertains to fire-fighting equipment and appliances, accounted for the most number of reported inspection deficiencies at 15% of the total. This was closely followed by Deficiency 07108 (related to Question 5a), pertaining to ready availability of fire-fighting equipment which accounted for 11% of the total reported deficiencies. Deficiency 08103 (related to Question 7), which pertains to fire alarms, accounted for the least number of reported inspection deficiencies at 1% of the total.

- The deficiency rate for CIC-topic related deficiencies was not included in the data set for this analysis.

- By ship type, offshore supply ships had the highest CIC-topic related detention rate (5.9%), followed by Ro-Ro passenger ships (4%) and general cargo/multipurpose ships (3.8%). A number of ship types had "zero" CIC-topic related detentions.

- By ship age, younger ships had the lowest detention rate (1%) and older ships the highest detention rate (6%). The rate increased steadily from ships less than 11 years old to ships over 30 years old.

- The vast majority of the ships inspected were only inspected once (90%). Of the remaining ships, 9% were inspected twice, 1% three times, and a total of 6 ships were inspected four times.

- With respect to CIC-topic related detentions, the flag state with the highest percentage of ships detained were Equatorial Guinea (50%). This was followed by the Cook Islands and Tanzania (both had 33%), Togo (25%) and Korea, DPR (13%). The remaining flag states were 7% and under, and 53 of the 86 flag states (63%) did not have any detentions.

- By ship risk categories, the CIC results are consistent with what would be expected in accordance with the risk profiling breakdown. This helps support the validity of the risk profiling methodology used by the TMOU. For general detentions and CIC-topic related detentions, ships considered very high risk comprised (by far) the largest percentage of ships detained per inspection. High risk ships accounted for the second most detained ships, followed by medium and low risk ships.

- There were a total of 7,787 inspections of ships where the certificate was recorded as issued by the RO. Only six (6) CIC-topic related detentions were recorded that had a deficiency linked to one of the three certificates. This equates to a very low detention rate of only 0.08%. By comparison, the detention rate for the overall CIC (CIC-topic related deficiencies) was 2.3% which means that ships for which ROs have the delegated authority to perform inspections and certifications on behalf of the member Maritime Authority performed significantly better than the broader CIC results.

- Of the TMOU member states, China by far conducted the most inspections (2,099), followed by Japan (1,587), Korea, Republic of (798) and Indonesia (676). The least number of inspections were conducted by Fiji (8) followed by Papua New Guinea (27). With respect to CIC-topic related detentions, Hong Kong detained the highest percentage of ships at a rate of 6%, followed by China at 3%. Four member states detained 2% of ships and five member states detained 1% of ships. Four member states did not detain any vessels for CIC-related deficiencies.

The analysis also revealed there are inconsistencies between the questionnaire data and the deficiency and detention data. These inconsistencies are common in all CICs. Several reasonable explanations exist however which support the conclusion that the questionnaire and the deficiency data are both correct but just not necessarily associated with each other in all cases. Independently and/or taken together, both results provide valuable information to TMOU Maritime Authorities as to the industry's level of compliance with specific aspects of SOLAS Chapter II-2 on Fire Protection, Fire Detection and Fire Extinction arrangements onboard ships.

It is also noted that there are inconsistencies in the number of individual ships reported in a number of tables within the report. Since the number of individual ships is not a key indicator used in the analysis, the inconsistencies are not considered critical; however, such misalignment of data does raise some concern as to the validity of the overall data.

2.2 Conclusions

The objective of the CIC was to provide indications as to the industry's level of compliance with specific aspects of SOLAS Chapter II-2 on Fire Protection, Fire Detection and Fire Extinction arrangements vessels regardless of type. New provisions were introduced in July 2002. It was also the intent of the CIC to help raise awareness of fire safety related issues.

During the campaign, 69% of the detentions were CIC-topic related, which if considered in isolation would lead to a conclusion that the industry has not achieved an acceptable level of compliance with SOLAS Chapter II-2 requirements.

However, the TMOU now monitors and publishes a key indicator for measuring the inspection compliance performance of ships as part of their broader PSC inspection regime which can be compared to the CIC results - percentage of detentions per inspection (detention rate). Although the TMOU also tracks and publishes deficiency rates (average number of deficiencies per inspection) for its broader PSC inspection regime, deficiency rate data was not included in the CIC analysis for the TMOU.

The overall detention rate for the CIC (CIC-topic related) was 2.3%. This compares very favourably to the latest overall TMOU PSC detention rate of 5.46% reported for 2011[1].

Given the highly positive results of the CIC detention rates (CIC-topic related) compared the results of the broader TMOU inspection regime reported for 2011, the TMOU concludes that the CIC has indeed provided sound evidence supporting that the industry has in general achieved a good level of compliance with the specific provisions of SOLAS Chapter II-2 pertaining to fire safety systems. In addition, every vessel that was inspected received the benefit of enhanced awareness of fire safety related issues. Nonetheless, the fact 69% of the detentions during the campaign were CIC-topic related is significant, and specific areas covered by the CIC that did not perform within acceptable standards still merit further attention.

2.3 Recommendations

The following recommendations are offered for consideration:

1. The TMOU continue, during normal PSC inspections, to put emphasis on the specific areas covered by the CIC that had the least favourable results.

CIC Questionnaire Results

3.1 Analysis

3.1.1 Response to CIC questionnaire

[1] TMOU 2011 Annual Report

Table 1 Response to CIC questionnaire

		'YES'		'NO'		N/A		Blank		Total # of inspections	% 'NO' of total # of inspections
Q1	Does the Fire Control Plan meet the requirements?	6314	95.6%	292	4.4%					6606	4.4%
Q2a	Do the fire fighters' outfits including personal equipment comply with the requirements?	6211	94.7%	347	5.3%	48	0.7%			6606	5.3%
Q2b	Do the Emergency Escape Breathing Devices (EEBD) comply with the requirements?	6392	97.9%	139	2.1%	75	1.1%			6606	2.1%
Q3	Are the portable extinguishers ready for use in locations as per the fire plan?	6464	98.2%	116	1.8%	26	0.4%			6606	1.8%
Q4*	Does the test of automatic audible alarm sound prior to release of a fixed gas fire-extinguishing medium into spaces in which personnel normally work?	5919	98.5%	93	1.5%	594	9.0%			6606	1.4%
Q5a*	Are the fire protection systems, fire fighting-systems and appliances maintained ready for use?	5882	89.0%	724	11%					6606	11%
Q5b	Is there a maintenance plan onboard to show that fire protection systems and fire- fighting systems and appliances (as appropriate) have been properly tested and inspected?	6244	94.5%	362	5.5%					6606	5.5%
Q6*	Is the crew familiar with the location and operation of fire-fighting systems and appliances that they may be called upon to use?	6331	95.8%	275	4.2%					6606	4.2%
Q7	Does the test of the sprinkler system trigger an automatic visual and audible alarm for the section?	2449	97.9%	53	2.1%	4104	62.1%			6606	0.8%

		'YES'		'NO'		N/A		Blank		Total # of inspections	% 'NO' of total # of inspections
Q8*	Does the activation of any detector or manually operated call point initiate a visual and audible fire signal at the control panel on the bridge or control station?	6265	97.6%	156	2.4%	185	2.8%			6606	2.4%
Q9	Is the lighting in escape routes, including the Low Location Lighting systems where applicable properly maintained?	6084	96.5%	222	3.5%	300	4.5%			6606	3.4%
Q10*	Is the Emergency Fire pump, capable of producing at least two jets of water?	6302	98.4%	100	1.6%	204	3.1%			6606	1.5%
Q11	Are the Isolating valves of the fire main marked, maintained and easily operable?	6042	94.1%	377	5.9%	187	2.8%			6606	5.7%
Q12*	Where a fire drill was witnessed was it found to be satisfactory?	3284	92.6%	262	7.4%	3060	46.3%			6606	4.0%
Q13	Was the ship detained as a result of the CIC?	217	3.3%	6389	96.7%					6606	96.7%

* 'NO' means: the ship may be considered for detention. The details of any detention should be appropriately entered on the PSC report B.

3.1.2. Analysis of answers to questionnaire

Table 1 above reveals that during the period of the CIC, a total of 6,606 inspections were carried out using the CIC questionnaire. The number of unsatisfactory responses per question ranges from 53 to 724 representing from 0.8% to 10.96% of total inspections respectively.

Responses to Question 4, which asked does the test of automatic audible alarm sound prior to release of a fixed gas fire-extinguishing medium into spaces in which personnel normally work, reported the most favourable results of all questions – only 93 unsatisfactory responses were recorded representing 1.4% of inspections. Question 10, Is the Emergency Fire pump, capable of producing at least two jets of water, reported the next most favourable results with only 100 unsatisfactory responses representing 1.6% of inspections.

The least favourable results were reported for Question 5a, which asked if fire protection systems, fire fighting systems and appliances were maintained ready for use – 724 unsatisfactory responses were recorded representing 11% of inspections. An unsatisfactory response to Question 5a was a potentially detainable violation. Question 12, which asked Where a fire drill was witnessed was it found to be satisfactory, reported the next least favourable results with 262 unsatisfactory responses representing 7.4% of inspections. Question 5b reported 362 unsatisfactory responses (5.5% of inspections) and Question 2a reported 347 unsatisfactory responses (5.3% of inspections).

Chart 1 below summarizes the CIC questionnaire results in order starting with the least favourable question response.

CHART 1: CIC Questionnaire Results in Order Starting with the Least Favourable Question Response

Q#	Column A Total # Inspections	Column B Total # "NO"	Column C Total # "YES"	Column D Total # "N/A"	Column F % "No" of Total # of Inspections
Q5a	6606	724	5882	0	10.96%
Q11	6606	377	6042	187	5.71%
Q5b	6606	362	6244	0	5.48%
Q2a	6606	347	6211	48	5.25%
Q1	6606	292	6314	0	4.42%
Q6	6606	275	6331	0	4.16%
Q12	6606	262	3284	3060	3.97%
Q9	6606	222	6084	300	3.36%
Q8	6606	156	6265	185	2.36%
Q2b	6606	139	6392	75	2.10%
Q3	6606	116	6464	26	1.76%
Q10	6606	100	6302	204	1.51%
Q4	6606	93	5919	594	1.41%
Q7	6606	53	2449	4104	0.80%

Please note that although it was the intent of the questionnaire at Question 13 to respond “YES” only to those inspections that resulted in detentions due to CIC-topic related deficiencies, PSCOs instead recorded the number of detentions of ships for which inspections were performed using a CIC questionnaire (217 detentions), which included both CIC-topic and non-CIC-topic related detentions. Based on the Form B/Notice of Detention for the Master paperwork, the actual number of vessels that were detained for CIC-topic related deficiencies was 150. This is the figure that is used throughout the rest of the report.

3.1.3. 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
Inspections	7449	6606	1668
Inspections with detentions	335	217	118
Detentions with *CIC-topic* related deficiencies	147	150	0

Table 2 reveals that a total of 8,274 inspections were conducted during the CIC, of which the vast majority were performed with the CIC questionnaire (6,606 or 80%). A total of 335 ships were detained. Of the ships that were inspected with a CIC questionnaire, a total of 217 ships were detained of which 150 were related to CIC-topic deficiencies. CIC-topic related deficiencies therefore accounted for 69% of the total ships detained which were inspected with a CIC questionnaire. The detention rate for CIC-topic related deficiencies was 2.3%.

3.1.4. 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)
01309	Does the Fire Control Plan meet the requirements?	177	0	0
07111	Do the fire fighters' outfits including personal equipment comply with the requirements?	354	6	0
07112	Do the Emergency Escape Breathing Devices (EEBD) comply with the requirements?	194	0	0
07110	Are the portable extinguishers ready for use in locations as per the fire plan?	659	8	1
07109	Does the test of automatic audible alarm sound prior to release of a fixed gas fire-extinguishing medium into spaces in which personnel normally work?	386	21	0
07108	Are the fire protection systems, fire fighting-systems and appliances maintained ready for use?	470	15	1
07124	Is there a maintenance plan onboard to show that fire protection systems and fire-fighting systems and appliances (as appropriate) have been properly tested and inspected?	305	4	0
07123	Is the crew familiar with the location and operation of fire-fighting systems and appliances that they may be called upon to use?	227	16	0

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)
08103	Does the test of the sprinkler system trigger an automatic visual and audible alarm for the section?	49	5	0
07106	Does the activation of any detector or manually operated call point initiate a visual and audible fire signal at the control panel on the bridge or control station?	410	23	2
07120	Is the lighting in escape routes, including the Low Location Lighting systems where applicable properly maintained?	301	3	2
04102	Is the Emergency Fire pump, capable of producing at least two jets of water?	183	34	0
07113	Are the Isolating valves of the fire main marked, maintained and easily operable?	393	26	0
04109	Where a fire drill was witnessed was it found to be satisfactory?	171	34	0
TOTAL		4,279	195	6

3.1.5. Analysis of CIC-topic related deficiencies

Deficiency 07110 (related to Question 3), which pertains to fire-fighting equipment and appliances, accounted for the most number of reported inspection deficiencies at 15% of the total. This was closely followed by Deficiency 07108 (related to Question 5a), pertaining to ready availability of fire-fighting equipment which accounted for 11% of the total reported deficiencies, and Deficiency 07106 (related to Question 8), pertaining to fire detection and alarm systems, which accounted for 10%.

Deficiency 08103 (related to Question 7), which pertains to fire alarms, accounted for the least number of reported inspection deficiencies at 1% of the total. Deficiency 04109 (fire drills), and Deficiency 04102 (emergency fire pump and its pipes) and Deficiency 1309 (fire control plan) accounted for the next least number of reported inspection deficiencies with each contributing 4% to the total.

Note, this analysis reveals there are some inconsistencies between the deficiency results and the questionnaire results which raise some questions. For example, Deficiency 07110 which pertains to Question 3 was the most used deficiency code, yet according to the questionnaire results Question 3 reported the fourth most favourable results of all questions.

Another example pertains to Deficiency 07106, which is the code for non-compliance with Question 8. According to the deficiency results, Deficiency 07106 is the third most used code, yet according to the questionnaire results Question 8 reported the sixth most favourable results of all questions.

The CIC instructions require that for each unsatisfactory answer in the questionnaire, Inspectors are to provide the detail of any deficiencies on the PSC Form B. The questionnaire also specifically notes for each question, the deficiencies that apply. It is thus reasonable to expect that there should be good correlation between the results of the questionnaire and the results of the deficiencies in terms of most favourable to least favourable; yet, the correlation is only 0.23.

Chart 2 below shows the comparison of the questionnaire and deficiency results for all CIC questions. It reveals that the number of “No” responses in the questionnaire exceeds the number of reported deficiencies for over half the questions. In some cases, the gap is significant.

CHART 2: Comparison of Questionnaire and Deficiency Results

Q#	Deficiency Code	Total # Inspections Responding "NO" on Questionnaire	Total # Inspections Using Deficiency Code on Form "B"
Q5a	07108	724	470
Q11	07113	377	393
Q5b	07124	362	305
Q2a	07111	347	354
Q1	01309	292	177
Q6	07123	275	227
Q12	04109	262	171
Q9	07120	222	301
Q8	07106	156	410
Q2b	07112	139	194
Q3	07110	116	659
Q10	04102	100	183
Q4	07109	93	386
Q7	08103	53	49

The inconsistencies that exist between the questionnaire data and the deficiency data are found in every CIC. One explanation may be that in some instances PSCOs are completing the questionnaire but are not doing the extra step for the unsatisfactory

answers and filling out the PSC Report Form B. Another explanation may be that given that the CIC is carried out in conjunction with the normal PSC inspections, perhaps in some cases PSCOs are filling out the questionnaire independent of the PSC Report Form B. It could also be a combination of both explanations.

The above explanations support that both the questionnaire and the deficiency data are likely correct but just not necessarily associated with each other in all cases. For this reason, it is the opinion of the TMOU that even though the deficiency and questionnaire data is not necessarily consistent, it does not diminish the validity of the overall results of the CIC. Independently and/or taken together, both results provide valuable information to TMOU Maritime Authorities as to the industry's level of compliance with specific aspects of SOLAS Chapter II-2 on Fire Protection, Fire Detection and Fire Extinction arrangements on board ships.

3.1.6. Number of ships to number of inspections in CIC

Table 4 Number of ships to number of inspections in CIC campaign

# of inspections performed per ship	# of ships	% of total
1	6704	90%
2	671	9%
3	68	1%
4	6	0%
TOTAL	7449*	

* It is noted that the total number of individual ships in Table 4, 6, 7 and Annex 1.2 is not a sum total of the column, as the approach to individual ship calculation is not summing, but regional identification calculations.

Table 4 reveals that the vast majority of the ships inspected during the CIC (90%) were only inspected once. Of the remaining ships, 9% were inspected twice, 1% three times, and a total of 6 ships were inspected four times.

3.1.7. Number of inspected ships per Ship Risk Profile

Table 5 Number of inspected ships per Ship Risk Profile

Target Factor	# of inspections	# of detentions	detention as % of inspections	detentions CIC-topic related	detentions CIC-topic related as % of inspections
Low	2375	34	1.4%	9	0.04%
Medium	3427	115	3.4%	48	1.4%
High	2313	153	6.6%	71	3.1%
Very high	159	45	28.3%	22	13.8%
TOTAL	8274	347	4.2%	150	1.8%
TOTAL FOR CIC QUESTIONNAIRE INSPECTIONS	6606	217	3.3%	150	2.3%

The CIC results shown in Table 5 above, which identify the number and percentage of ship detentions falling in each of the ship risk profile categories, are consistent with what would be expected in accordance with the risk profiling breakdown. This helps support the validity of the risk profiling methodology used by the TMOU. For general detentions and CIC-topic related detentions, ships considered very high risk comprised (by far) the largest percentage of ships detained per inspection. High risk ships accounted for the second most detained ships, followed by medium and low risk ships.

3.1.8. Number of inspected ships and detentions per ship type

Table 6 Number of inspected ships and detentions per ship type

Ship type	# of individual ships	# of inspections	# of CIC inspections	# of detention	detention as % of inspections	detentions CIC-topic related	detentions CIC-topic related as % of inspections
Bulk carrier	2522	2803	2124	83	3.0%	34	1.2%
Chemical tanker	502	535	416	15	2.8%	7	1.3%
Combination carrier	9	9	3	0	0.0%	0	0.0%
Container	1180	1237	1136	27	2.2%	10	0.8%
Gas carrier	162	168	132	4	2.4%	3	1.8%
General cargo/multipurpose	1763	2112	1639	175	8.3%	81	3.8%
Heavy load	29	29	30	1	3.4%	0	0.0%
High speed passenger craft	4	4	2	0	0.0%	0	0.0%
Livestock carrier	8	8	5	2	25.0%	0	0.0%
NLS tanker	7	7	11	0	0.0%	0	0.0%
Offshore supply	35	35	19	2	5.7%	2	5.7%
Oil tanker	503	533	397	6	1.1%	3	0.6%
Other special activities	68	71	57	4	5.6%	2	2.8%
Passenger ship	50	56	47	1	1.8%	0	0.0%
Refrigerated cargo	209	217	216	17	7.8%	5	2.3%
Ro-Ro cargo	49	55	41	4	7.3%	1	1.8%
Ro-Ro passenger ship	19	25	18	1	4.0%	1	4.0%
Special purpose ship	17	17	14	0	0.0%	0	0.0%
Tugboat	47	47	24	0	0.0%	0	0.0%
Vehicle carrier	214	223	210	4	1.8%	1	0.4%
Woodchip carrier	72	83	65	1	1.2%	0	0.0%
TOTAL	7449*	8274	6606	347	4.2%	150	1.8%
TOTAL FOR CIC QUESTIONNAIRE INSPECTIONS			6606	217	3.3%	150	2.3%

* It is noted that the total number of individual ships in Table 4, 6, 7 and Annex 1.2 is not a sum total of the column, as the approach to individual ship calculation is not summing, but regional identification calculations.

Table 6 reports the number of ship inspections and the number and percentage of ships detained during the CIC by ship type. With respect to CIC-topic related detentions, offshore supply ships had the highest detention rate (5.7%), followed by Ro-Ro passenger ships (4%), general cargo/multipurpose ships (3.8%), and other special activity ships (2.8%). A number of ship types had “zero” CIC-topic related detentions

including combination carriers, heavy load ships, high speed passenger crafts, livestock carriers, NLS tankers, passenger ships, special purpose ships, tugs and woodchip carriers.

It is important to note that the sample sizes (number of ships inspected) of the top two ship types detained (offshore supply ships and Ro-Ro passenger ships) were very low compared to the third most detained ship type (general cargo/multipurpose), as well as compared to several other ship types including chemical tankers, bulk carriers, and container ships. There were only 35 inspections of offshore supply ships compared to 2,112 general cargo/multipurpose ship inspections, 535 chemical tanker inspections, 2,803 bulk carrier inspections, and 1,237 container inspections. The detention rate for chemical tankers was 1.3%, bulk carriers was 1.2% and container ships 0.8%.

Although smaller sample sizes do not invalidate the results in anyway, it does however provide less certainty as to how widespread a finding may be within a specific ship type. If available, comparing the data in Table 6 with the total number of ships that comprise the overall convention ship fleet by ship type would help improve this uncertainty and bring more precision to the analysis.

If only vessel types with a relatively larger sample size are considered in the analysis, general cargo/multipurpose ships become the ship type with the highest percentage of detentions followed by bulk carriers and container ships.

3.1.9 Inspections and detentions per Flag State

The table in Annex 1.2 presents the number of inspections and number and percentage of ships detained during the CIC by flag state. Ships from 86 different flag states were inspected during the CIC.

With respect to CIC-topic related detentions, the flag state with the highest percentage of ships detained were Equatorial Guinea (50%). This was followed by the Cook Islands and Tanzania (both had 33%), Togo (25%) and Korea, DPR (13%). The remaining flag states were 7% and under, and 53 of the 86 flag states (63%) did not have any detentions.

The flag states with the highest percentage of ships detained had relatively smaller sample sizes (number of ships inspected) compared to other flag states. Again, as mentioned previously, smaller sample sizes do not make the results any less valid but rather reduces the certainty as to how widespread a finding may be, in this case, for a particular flag state. If available, including the number of ships that comprise each flags convention fleet in the Annex 1.2 table would help improve this uncertainty and bring more precision to the results.

3.1.10 Inspections and detentions per Recognized Organization

The table in Annex 1.5 presents the number of inspections (by vessel certificate – 502, 504 and 513) and number of CIC-topic related detentions by Recognized Organization (RO). It shows there were a total of 7,787 inspections of ships where the certificate was recorded as issued by the RO and only five (6) CIC-topic related detentions which had a deficiency linked to one of the three certificates. This equates to a very low detention rate of only 0.08%.

By comparison, the detention rate for the overall CIC (CIC-topic related deficiencies) was 2.3% which means that ships for which ROs have the delegated authority to perform inspections and certifications on behalf of the member Maritime Authority performed significantly better than the broader CIC results.

The ROs with the detentions were Nippon Kaiji Kyokai (2), Bureau Veritas (1), International Ship Classification (1), Union Bureau of Shipping (1) and "Other" (1). Nippon Kaiji Kyokai ships also had by far the largest number of inspections (2,417) comprising 31% of RO ships inspected.

3.1.11 Ship age overview

Table 7 ship age overview

Ship age	# of individual ships	# of inspections	# of CIC inspections	# of detentions	Detention as a % of inspections	Detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
< 6 Years	2515	2729	2166	60	2%	25	1%
6-11 Years	2020	2202	1789	74	3%	32	1%
12-17 Years	1142	1270	1044	47	4%	21	2%
18-23 Years	844	947	771	52	5%	23	2%
24-29 Years	655	799	585	74	9%	30	4%
30-35 Years	219	256	193	31	12%	15	6%
>35 Years	61	71	58	9	13%	4	6%
TOTAL	7449*	8274	6606	347	4.2%	150	1.8%
TOTAL FOR CIC QUESTIONNAIRE INSPECTIONS			6606	217	3.3%	150	2.3%

* It is noted that the total number of individual ships in Table 4, 6, 7 and Annex 1.2 is not a sum total of the column, as the approach to individual ship calculation is not summing, but regional identification calculations.

Table 7 reports the number of ship inspections and the number and percentage of ships detained during the CIC by ship age. By ship age, the data clearly indicates that the rate of ship detention per inspection increases with ship age. For ships less than 11 years old, the rate of detention was 1% and the rate steadily increases to where ships over 30 years old have a rate of detention of 6% per inspection.

3.2 Results on former CICs on same subject

Not applicable – this is the first CIC for this subject matter.

3.3 Results other CIC participants

Table 8 Results other CIC participants

	PMOU	TMOU
# of inspections with CIC Questionnaire	4,014	6,606
# of detentions	160	217
Detentions as a % of inspections	4.0%	3.3%
Detentions with CIC-topic related deficiencies	103	150
Detentions with CIC-topic related deficiencies as a % of inspections	2.6%	2.3%
Detentions with CIC-topic related deficiencies as a % of detentions	64%	69%
CIC Question reporting the most favourable results	Q3	Q4
CIC Question reporting the least favourable results	Q12	Q5a and Q12
Ship type reporting the least favourable results*	Cargo/multipurpose ships	Cargo/multipurpose ships
Ship age reporting the most favourable results	< 6 years	<11 years
Ship age reporting the least favourable results	>35 years	> 30 years
RO ships detention rate for CIC-topic related detentions	0.5%	0.09%
# of RO responsibility ship inspections during CIC	3419	7787
Most recent published annual detention rate for broader PSC inspection regime	3.28%	5.46%

* Taking into consideration sample sizes.

Table 8 reveals that TMOU member states conducted 39.2% more inspections with CIC questionnaires than PMOU member states during the three months of the campaign. However, detentions as a percentage of inspections were 17.5% higher for the PMOU overall and 11.5% higher for CIC-topic related detentions. Nonetheless, the proportion of detentions with CIC-topic related deficiencies as a percentage of total detentions was higher for TMOU inspections by 5%.

Cargo/multipurpose ships were the most problematic ship type for both the TMOU and PMOU and older ships had the highest rate of detention in both cases.

There was a slight difference however in the PMOU and TMOU results with respect to inspections of RO responsibility ships. Although only 3419 RO recorded responsibility issuing ship certificates were conducted by PMOU member states, the detention rate for CIC-topic related deficiencies was five times higher than TMOU. In stark contrast, TMOU member states inspected 7,043 RO recorded responsibility issuing ship certificates (the vast majority of all ships inspected by TMOU member states) and the detention rate for CIC-topic related deficiencies was low at 0.09%. This result is below the PMOU results for the CIC, but also better than the TMOU broader PSC inspection results reported annually.

Overall, both the PMOU and TMOU CIC results faired better than their respective broader PSC inspection results, thus both authorities conclude that the CIC has indeed provided sound evidence supporting that the industry has in general achieved a good level of compliance with the specific provisions of the SOLAS Chapter II-2 pertaining to fire safety systems.

Annex 1 CIC Questionnaire

Annex 1.1 Inspection form of the CIC

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

CONCENTRATED INSPECTION CAMPAIGN
ON FIRE SAFETY SYSTEM (FSS)
01/09/2012 to 30/11/2012

CIC ON FIRE SAFETY SYSTEM (FSS)

Inspection Authority			
Ship Name		**Flag**	
IMO number		**Classification Society**	
Date of inspection		**Inspection port**	

No.	Item	Yes	No	N/A
1	Does the Fire Control Plan meet the requirements? SOLAS Ch II-2/ Reg 15.2.4 and Reg 15.3.2 (Def code 01309)	☐	☐	
2a	Do the fire fighters' outfits including personal equipment comply with the requirements? SOLAS Ch II-2/ Reg 10.10 and Reg 14.2.2. (Def code 07111)	☐	☐	☐
2b	Do the Emergency Escape Breathing Devices (EEBD) comply with the requirements? SOLAS Ch II-2/ Reg 13.3.4 and Reg 13.4.3 (Def code 07112)	☐	☐	☐
3	Are the portable extinguishers ready for use in locations as per the fire plan? SOLAS Ch II-2/ Reg 10.3.2.4 (Def code 07110)	☐	☐	☐
*4	Does the test of automatic audible alarm sound prior to release of a fixed gas fire-extinguishing medium into spaces in which personnel normally work? SOLAS Ch II-2/ Reg 10.5. (Def code 07109)	☐	☐	☐
*5a	Are the fire protection systems, fire fighting-systems and appliances maintained ready for use? SOLAS/Ch II-2/ Reg 14.2.1. (Def code 07108)	☐	☐	
5b	Is there a maintenance plan onboard to show that fire protection systems and fire- fighting systems and appliances (as appropriate) have been properly tested and inspected? SOLAS/Ch II-2/ Reg14.2.2 (Def code 07124)	☐	☐	
*6	Is the crew familiar with the location and operation of fire-fighting systems and appliances that they may be called upon to use? SOLAS/Ch II-2/ Reg 15.2.2 (Def code 07123)	☐	☐	
7	Does the test of the sprinkler system trigger an automatic visual and audible alarm for the section? SOLAS/Ch II-2/ Reg10.6 (Def code 08103)	☐	☐	☐
*8	Does the activation of any detector or manually operated call point initiate a visual and audible fire signal at the control panel on the bridge or control station? SOLAS Ch II-2/ Reg 7.4.2 (Def code 07106)	☐	☐	☐
9	Is the lighting in escape routes, including the Low Location Lighting systems where applicable properly maintained? SOLAS Ch II-2/ Reg 13 (Def code 07120)	☐	☐	☐
*10	Is the Emergency Fire pump, capable of producing at least two jets of water? SOLAS/Ch II-2/ Reg 10.2.2.3.1 and Reg 10.2.2.4.2 (Def code 04102)	☐	☐	☐
11	Are the Isolating valves of the fire main marked, maintained and easily operable? SOLAS/Ch II-2/ Reg10.2.1.4 (Def code 07113)	☐	☐	☐
*12	Where a fire drill was witnessed was it found to be satisfactory? SOLAS Ch II-2/R 15.2.2.5 and SOLAS Ch-III/ Reg 19.3 (Def code 04109)	☐	☐	☐
13	Was the ship detained as a result of the CIC?	☐	☐	

Notes: 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.

For questions combined with the conjunction "and" if the box "YES" is checked that means all the parts in the question are in compliance.

Annex 1.2 Inspections and Detentions per Flag State

Table Annex 1.2 Inspections and detentions per Flag State

Flag	# of individual ships	# of inspections	# of CIC inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
Antigua and Barbuda	142	148	139	8	5%	2	1%
Argentina	1	1	1	0	0%	0	0%
Australia	1	1	0	0	0%	0	0%
Bahamas	173	183	162	4	2%	1	1%
Bangladesh	7	7	5	0	0%	0	0%
Barbados	4	4	3	1	25%	0	0%
Belgium	3	4	4	0	0%	0	0%
Belize	91	111	86	14	13%	6	5%
Bermuda (GB)	8	10	7	0	0%	0	0%
Brazil	1	1	1	0	0%	0	0%
Cambodia	302	419	284	62	15%	20	5%
Canada	1	1	1	0	0%	0	0%
Cayman Islands (GB)	26	29	22	1	3%	1	3%
China	253	273	212	4	1%	2	1%
Comoros	1	1	1	0	0%	0	0%
Cook Islands	3	3	1	1	33%	1	33%
Croatia	5	5	5	0	0%	0	0%
Curacao	7	7	8	0	0%	0	0%
Cyprus	130	136	115	2	1%	2	1%
Denmark	33	33	28	1	3%	0	0%
Dominica	3	3	1	0	0%	0	0%
Ecuador	1	1	1	0	0%	0	0%
Egypt	5	5	5	0	0%	0	0%
Equatorial Guinea	1	2	1	1	50%	1	50%
Ethiopia	1	1	1	1	100%	0	0%
Finland	1	1	1	0	0%	0	0%
France	12	12	11	0	0%	0	0%
Germany	55	56	53	2	4%	1	2%
Gibraltar (GB)	19	20	18	1	5%	0	0%

Flag	# of individual ships	# of inspections	# of CIC inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
Greece	79	84	67	1	1%	1	1%
Hong Kong, China	706	784	634	2	0%	1	0%
India	27	28	20	0	0%	0	0%
Indonesia	37	43	24	6	14%	3	7%
Iran, Islamic Republic of	1	1	1	0	0%	0	0%
Isle of Man (GB)	46	47	38	1	2%	0	0%
Israel	1	1	1	0	0%	0	0%
Italy	29	32	23	0	0%	0	0%
Jamaica	3	4	2	0	0%	0	0%
Japan	51	52	42	2	4%	0	0%
Kiribati	41	50	41	4	8%	3	6%
Korea, Democratic People's Republic of	41	46	27	9	20%	6	13%
Korea, Republic of	348	375	333	2	1%	0	0%
Kuwait	6	6	5	0	0%	0	0%
Lao People's Democratic Republic	1	1	0	0	0%	0	0%
Liberia	539	575	468	20	3%	6	1%
Libyan Arab Jamahiriya	2	2	1	0	0%	0	0%
Lithuania	1	1	0	0	0%	0	0%
Luxembourg	2	2	3	0	0%	0	0%
Malaysia	57	60	41	3	5%	3	5%
Maldives	2	3	2	0	0%	0	0%
Malta	172	189	146	4	2%	1	1%
Marshall Islands	403	441	327	11	2%	3	1%
Moldova, Republic of	1	1	0	0	0%	0	0%
Mongolia	28	30	21	3	10%	2	7%
Myanmar	1	1	1	0	0%	0	0%
Netherlands	33	36	29	3	8%	0	0%
New Zealand	1	1	1	0	0%	0	0%
Norway	56	58	50	2	3%	2	3%

Flag	# of individual ships	# of inspections	# of CIC inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
Pakistan	1	1	1	0	0%	0	0%
Palau	1	1	0	0	0%	0	0%
Panama	2283	2584	2095	113	4%	61	2%
Papua New Guinea	3	3	2	0	0%	0	0%
Philippines	57	60	50	5	8%	2	3%
Portugal	3	3	3	0	0%	0	0%
Qatar	1	1	1	0	0%	0	0%
Russian Federation	80	80	77	3	4%	0	0%
Saint Kitts and Nevis	6	9	5	0	0%	0	0%
Saint Vincent and the Grenadines	42	47	34	3	6%	1	2%
Samoa	1	2	0	0	0%	0	0%
Saudi Arabia	7	7	6	0	0%	0	0%
Ship registration withdrawn	1	1	0	0	0%	0	0%
Sierra Leone	41	54	33	8	15%	3	6%
Singapore	488	510	393	5	1%	1	0%
Sweden	9	9	8	0	0%	0	0%
Switzerland	8	8	7	1	13%	0	0%
Taiwan, China	19	20	20	2	10%	0	0%
Tanzania, United Republic of	10	12	7	4	33%	4	33%
Thailand	69	76	45	6	8%	2	3%
Togo	4	4	3	1	25%	1	25%
Tonga	3	3	3	0	0%	0	0%
Tunisia	1	1	0	0	0%	0	0%
Turkey	5	5	1	0	0%	0	0%
Tuvalu	31	36	28	4	11%	1	3%
United Arab Emirates	0	0	1	0	0%	0	0%
United Kingdom	52	53	50	2	4%	1	2%
United States	18	18	17	0	0%	0	0%
Vanuatu	36	40	35	1	3%	1	3%

Flag	# of individual ships	# of inspections	# of CIC inspections	# of detentions	Detention as a % of inspections	# of detentions CIC-topic related	Detentions CIC-topic related as a % of inspections
Vietnam	173	194	156	13	7%	4	2%
TOTAL	7449*	8274	6606	347	4.2%	150	1.8%
TOTAL FOR CIC QUESTIONNAIRE INSPECTIONS			6606	217	3.3%	150	2.3%

* It is noted that the total number of individual ships in Table 4, 6, 7 and Annex 1.2 is not a sum total of the column, as the approach to individual ship calculation is not summing, but regional identification calculations.

Annex 1.3 Inspections and detentions per Recognized Organization

Table Annex 1.3 Inspections and detentions per Recognized Organization

Issuing authority	Inspection*			Detentions CIC-topic related with RO responsibility**
	502 – Cargo Ship Safety Equipment	504 – Cargo Ship Safety	513 – Passenger Ship Safety	
Alpha Register of Shipping	1	0	0	0
American Bureau of Shipping	523	1	1	0
Bureau Veritas	490	7	1	1
China Classification Society	602	1	4	0
China Corporation Register of Shipping	40	0	0	0
Croatian Register of Shipping	5	0	0	0
Det Norske Veritas	429	2	6	0
Germanischer Lloyd	615	6	2	0
Global Marine Bureau Inc.	89	15	0	0
Global Shipping Bureau	3	0	0	0
Indian Register of Shipping	6	0	0	0
Inspeccion y Clasificacion Maritima (INCLAMAR)	2	0	0	0
Intermaritime Certification Services, S.A.	77	1	0	0
International Naval Surveys Bureau	5	0	0	0
International Register of Shipping	51	0	1	0
International Ship Classification	64	0	0	1
Isthmus Bureau of Shipping, S.A.	70	4	0	0
Korea Classification Society	45	5	0	0
Korea Ship Safety Technology Authority	1	0	0	0
Korean Register of Shipping	701	3	19	0
Lloyd's Register	557	12	13	0
National Shipping Adjuster Inc.	4	0	0	0
Nippon Kaiji Kyokai	2408	5	4	2
No class	1	0	0	0
Other	39	3	0	1
Overseas Marine Certification Services	38	0	0	0
Panama Bureau of Shipping	3	1	0	0
Panama Maritime Documentation Services	79	0	0	0
Panama Shipping Registrar Inc.	15	0	0	0
Polski Rejestr Statkow (Polish Register of Shipping)	6	0	0	0

Issuing authority	Inspection*			Detentions CIC-topic related with RO responsibility**
	502 – Cargo Ship Safety Equipment	504 – Cargo Ship Safety	513 – Passenger Ship Safety	
PT Biro Klasifikasi Indonesia	2	0	1	0
Registro Internacional Naval, S.A.	2	0	0	0
Registro Italiano Navale	90	0	6	0
Rinave Portuguesa	1	0	0	0
Russian Maritime Register of Shipping	105	1	1	0
Ship Classification Of Malaysia	1	0	0	0
Singclass International	5	0	0	0
Sing-Lloyd	12	0	0	0
Union Bureau of Shipping	201	19	0	1
Universal Maritime Bureau Ltd	50	4	0	0
Universal Shipping Bureau Inc.	5	0	0	0
Vietnam Register of Shipping	194	1	0	0
TOTAL	7637	91	59	6

* 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