

# **Report of the 2021 Concentrated Inspection Campaign (CIC) on Stability in General**



January, 2023

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## Executive Summary

The Concentrated Inspection Campaign (CIC) on Ship's Stability in General was carried out in the Tokyo MOU region jointly with the Paris MoU from 1 September to 30 November 2021. The purpose of the campaign was to confirm crew's familiarization with, and to create awareness of, the importance of calculating the actual stability condition of the ship before departure and to verify ship's compliance with stability requirements under the relevant IMO instruments. This document is to report the results of the campaign.

During the campaign period, the member Authorities of the Tokyo MOU carried out 6,260 PSC inspections, of which 4,984 (79.62%) included the CIC inspection. 379 CIC related deficiencies were found on 328 ships representing 6.58% of the CIC inspections.

Eight of the 4,984 ships subject to a CIC inspection were detained for CIC related deficiencies. This represents 6.61% of all 121 detentions for all 6,260 ships inspected over the period. This outcome appears to indicate a relatively high level of compliance with stability in general noting that:

- CIC Inspections resulted in 8 subject related detentions from 4,984 CIC inspections giving a detention rate of 0.16%
- All Inspections resulted in 121 detentions for all causes from 6,260 inspections giving a detention rate of 1.93%

The highest number of CIC related deficiencies were relating to the Loading/Ballast condition 159 (41.95%), followed by Cargo operation 75 (19.79%) and Bridge operation 52 (13.72%).

Bulk carriers were subject to the highest number of CIC inspections accounting for 2,126 (42.66%) inspections, followed by general cargo vessels 911 (18.28%) and container vessels 893 (17.92%). This reflects the general inspection trend for all inspections by ship type.

The most CIC inspections relating to flag were carried out to the ships under the flags of Panama 1,390 (27.89%), followed by Hong Kong (China) 587 (11.78%), Liberia 564 (11.32%).

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# **1 Introduction**

## **1.1 Purpose of this Report**

The purpose of this report is to present the results of the Concentrated Inspection Campaign (CIC) on Ship's Stability in General conducted by member authorities to the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU) on port State control (PSC) between 1<sup>st</sup> September and 30<sup>th</sup> November 2021.

## **1.2 Objective of the CIC**

The purpose of the campaign was to confirm crew's familiarization with, and to create awareness of, the importance of calculating the actual stability condition of the ship before departure and to verify ship's compliance with stability requirements under the relevant IMO instruments. This document is to report the results of the campaign.

## **1.3 Scope of the CIC**

The scope of the CIC includes all ships targeted for PSC inspection within Tokyo MOU Region between 1<sup>st</sup> September 2021 and 30<sup>th</sup> November 2021.

## **1.4 General Remarks**

1.4.1 For the purpose of this report, a CIC topic detention is an inspection containing at least one deficiency that is considered a ground for detention relating to the questionnaire of the CIC.

1.4.2 The numbers in CIC statistics are slightly different from the numbers in the press release on the interim report of the CIC as the numbers in the press release was preliminary.

1.4.3 The numbers of 2021 in the tables do not reflect where the CIC questionnaire was not used in the inspection except table 2.



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## 2 Summary, Conclusions and Recommendations

### 2.1 Summary

2.1.1 The Tokyo MOU carried out a CIC on Ship's Stability in General jointly with the Paris MoU between 1 September 2021 and 30 November 2021. The member Authorities assessed shipboard compliance with the requirements relating to stability of the ship during the campaign using unified questionnaire set out in the Annex 1.

2.1.2 During the campaign period, the member Authorities of the Tokyo MOU carried out 6,260 PSC inspections, of which 4,984 (79.62%) included the CIC inspection. 379 CIC related deficiencies were found on 328 ships representing 6.58% of the CIC inspections.

2.1.3 The highest number of CIC related deficiencies were relating to the Loading/Ballast condition 159 (41.95%), followed by Cargo operation 75 (19.79%) and Bridge operation 52 (13.72%).

2.1.4 Bulk carriers were subject to the highest number of CIC inspections accounting for 2,126 (42.66%) inspections, followed by general cargo vessels 911 (18.28%) and container vessels 893 (17.92%). This reflects the general inspection trend for all inspections by ship type.

2.1.5 The most CIC inspections relating to flag were carried out to the ships under the flags of Panama 1,390 (27.89%), followed by Hong Kong (China) 587 (11.78%), Liberia 564 (11.32%).

2.1.6 The flag State with the highest rate of CIC topic related detentions were Mongolia (1 of 2 inspections, or 50.00%) followed by Indonesia (1 of 4 inspections, or 25.00%) and Togo (1 of 5 inspections, or 20.00%).

2.1.7 Among 4,984 ships subject to a CIC inspection, eight were detained for CIC related deficiencies. This represents 6.61% of all 121 detentions for all 6,260 ships inspected over the period. Comparing to those of recent years (55 (25.4%) CIC detentions out of 216 all over detentions in 2019, 5 (2.53%) out of 198 in 2018 and 36 (22.93%) out of 157 in 2017), this outcome appears indicating relatively high level of compliance with stability in general noting that:

- CIC Inspections resulted in 8 subject related detentions from 4,984 CIC inspections giving a detention rate of 0.16%
- All Inspections resulted in 121 detentions for all causes from 6,260 inspections giving a detention rate of 1.93%

### 2.2 Conclusions

The statistical data from CIC indicate a relatively high level of compliance with stability in general.

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## **2.3 Recommendations**

The ship's stability is directly related to the safety of the ship, therefore, it is necessary for PSCOs to keep attention to the stability issues during inspection continuously, in particular to check the ability of the master or responsible officer for calculation of the stability accurately and correctly before departure.

### 3 CIC Questionnaire Results

#### 3.1 Analysis

##### 3.1.1 Responses to CIC Questionnaire

**Table 1** Responses to CIC Questionnaire

		YES		NO		N/A		Blank		<u>Detained*</u>	
		#	% <sup>1</sup>	#	% <sup>1</sup>	#	% <sup>2</sup>	#	% <sup>2</sup>	#	%
<b>Q1*</b>	Has the ship been provided with approved stability information which can be understood and easily used by the Master and loading officer?	4,960	99.52	24	0.48			0	0	3	0.06
<b>Q2*</b>	Is the data used in the stability check for departure complete and correct?	4,820	96.71	164	3.29			0	0	4	0.08
<b>Q3*</b>	Does the ship comply with the stability criteria as applicable to the ship type?	4,979	99.90	5	0.10			0	0	2	0.04
<b>Q4*</b>	Is there evidence to show that the Master or responsible officer can determine the stability of the ship under varying conditions of service using the approved stability information provided on board?	4,925	98.82	59	1.18			0	0	4	0.08
<b>Q5*</b>	If the ship is provided with a Stability Instrument, is it approved by the Administration?	4,224	99.60	17	0.40	743	14.91	0	0	3	0.06
<b>Q6</b>	If the ship is provided with a Stability Instrument, does the type of stability software in use meet the requirements for the relevant ship type?	4,235	99.86	6	0.14	743	14.91	0	0	0	—
<b>Q7</b>	[Is there evidence on board to show that the master/loading officer confirms that the “calculated” displacement and trim corresponds with the “observed” draughts?]	4,880	97.91	104	2.09			0	0		
<b>Q8</b>	[If the ship is provided with a Stability Instrument, has the accuracy of the stability instrument been verified periodically by applying at least one approved test condition?]	4,247	96.94	134	3.06	603	12.10	0	0		

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

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

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

Note : Questions 7 and 8 are for information purposes only.



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### **3.1.2 Analysis of answers to CIC Questionnaire in relation to detention**

3.1.2.1 There were five questions for which ship may be considered for detention when the answer to such question are "NO". These questions related to:

- Q1: Whether the ship has been provided with approved stability information which can be understood and easily used by the Master and loading officer;
- Q2: Whether the data used in the stability check for departure is complete and correct;
- Q3: Whether the ship comply with the stability criteria as applicable to the ship type;
- Q4: Whether there is evidence to show that the Master or responsible officer can determine the stability of the ship under varying conditions of service using the approved stability information provided on board; and
- Q5: If the ship is provided with a Stability Instrument, whether it is approved by the Administration.

3.1.2.2 Among 4,984 ships subject to a CIC inspection, eight were detained for CIC related deficiencies. This represents 6.61% of all 121 detentions for all 6,260 ships inspected over the period. Comparing to those of recent years (55 (25.4%) CIC detentions out of 216 all over detentions in 2019, 5 (2.53%) out of 198 in 2018 and 36 (22.93%) out of 157 in 2017), this outcome appears indicating relatively high level of compliance with stability in general noting that:

- CIC Inspections resulted in 8 subject related detentions from 4,984 CIC inspections giving a detention rate of 0.16%
- All Inspections resulted in 121 detentions for all causes from 6,260 inspections giving a detention rate of 1.93%

3.1.2.3 As a breakdown of the detention deficiencies, the most frequently used deficiency codes were code 02134 (Loading/Ballast condition) which relates to Q2 and Q3, and code 06107 (Cargo operation) which relates to Q4, both accounted for 4, as shown in the table 3.

### **3.1.3 Analysis of CIC-topic related deficiencies**

3.1.3.1 Table 3 indicates that deficiency code 02134 relating to the Loading/Ballast condition shows the highest number of reported deficiencies for a single deficiency code (159 deficiencies or 41.95% of total deficiencies).

3.1.3.2 The most satisfactory result was for Q3, Q6 and Q5, which asked whether the ship complies with the stability criteria as applicable to the ship type, if the ship is provided with a Stability Instrument, whether the type of stability software in use meets the requirements for the relevant ship type, and, if the ship is provided with a Stability Instrument, whether it is approved by the Administration - only 5 (0.10%) for Q3, 6 (0.14%) for Q6 and 17 (0.40%) for Q5 answered "No".

3.1.3.3 The least favorable results was for Q2, which queried whether the data used in the stability check for departure is complete and correct with 164 (3.29%) of “No” answers from applicable respondents.

3.1.3.4 The results for Question 8, asking, if the ship is provided with a Stability Instrument, whether the accuracy of the stability instrument has been verified periodically by applying at least one approved test condition, was the second highest number of unsatisfactory responses. 134 inspections were recorded an unfavourable result in this area, which represents 3.06% of CIC inspections.

### 3.1.4 Number of inspections in CIC

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

	INSPECTIONS PERFORMED WITH A CIC QUESTIONNAIRE	INSPECTIONS WITHOUT A CIC QUESTIONNAIRE
Total	4,984	1,276
Detentions	121	
Detentions with CIC-topic related deficiencies	8	

### 3.1.5 Specification of CIC-related deficiencies

Table 3- Specification of CIC-topic related deficiencies

CIC-topic related deficiencies		(# 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)	
		2020	2021	2020	2021	2020	2021
Deficiency		2020	2021	2020	2021	2020	2021
01316	Cargo information	5	19	0	1	0	0
01326	Stability Information Booklet	3	31	0	3	0	1
02103	Stability/strength/loading information and instruments	5	38	0	3	0	1
02134	Loading/Ballast condition	1	159	0	4	0	3
06102	Grain	1	5	0	0	0	0
06107	Cargo operation	24	75	0	4	0	3
10133	Bridge operation	24	52	0	0	0	0
<b>Grand total</b>		<b>63</b>	<b>379</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>8</b>

### 3.1.6 Number of inspected ships per Ship Risk Profile

Table 4- Number of inspected ships per Ship Risk Profile

CIC-topic related deficiencies	(# 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)	
	2020	2021	2020	2021	2020	2021
<b>Ship Risk Profile</b>						
<b>HRS</b>	27	134	0	4	0	3
<b>LSR</b>	7	32	0	0	0	0
<b>SRS</b>	29	161	0	4	0	2
<b>UNKNOWN</b>	0	1	0	0	0	0
<b>Grand Total</b>	63	<b>328</b>	0	<b>8</b>	0	<b>5</b>

### 3.1.7 Number of inspected ships and detentions per ship type

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

CIC-topic related deficiencies	(# 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)	
	2020	2021	2020	2021	2020	2021
<b>Ship type</b>						
Bulk carrier	29	131	0	3	0	1
Chemical tanker	1	20	0	0	0	0
Combination carrier	0	1	0	0	0	0
Container ship	7	54	0	0	0	0
Fish factory	0	2	0	0	0	0
Gas carrier	0	7	0	0	0	0
General cargo/multipurpose	20	78	0	5	0	4
Heavy load	0	1	0	0	0	0
Oil tanker	2	7	0	0	0	0
Oil tanker/Chemical tanker (OILCHEM)	1	6	0	0	0	0
Other special activities	1	5	0	0	0	0
Passenger ship	0	1	0	0	0	0
Refrigerated cargo	0	4	0	0	0	0
Ro-Ro cargo	0	1	0	0	0	0
Ro-Ro passenger ship	1	2	0	0	0	0
Special purpose ship	0	1	0	0	0	0
Tug	0	3	0	0	0	0
Vehicle carrier	1	4	0	0	0	0
<b>Grand Total</b>	<b>63</b>	<b>328</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>5</b>

### 3.1.8 Inspections and detentions per Flag State

(see Annex 1.2)

### 3.1.9 Ship age overview

Table 6 Ship age overview

CIC-topic related deficiencies	(# 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)	
	2020	2021	2020	2021	2020	2021
<b>Ship age</b>						
<b>0 - 6</b>	6	51	0	2	0	0
<b>7 - 12</b>	26	85	0	1	0	0
<b>13 - 18</b>	10	106	0	2	0	2
<b>19 - 24</b>	12	46	0	2	0	2
<b>25 - 30</b>	7	27	0	1	0	1
<b>31 - 35</b>	2	10	0	0	0	0
<b>35+</b>	0	3	0	0	0	0
<b>Grand Total</b>	<b>63</b>	<b>328</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>5</b>

# Annex 1

## Annex 1.1 Inspection form for the CIC

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



CONCENTRATED INSPECTION CAMPAIGN  
ON SHIP'S STABILITY IN GENERAL  
01/09/2021 to 30/11/2021

CIC on Ship's Stability in General			
Inspection Authority			
Ship Name		IMO Number	
Date of Inspection		Inspection Port	

**QUESTIONS 1 - 6 ANSWERED WITH A "NO" MUST BE ACCOMPANIED BY A RELEVANT DEFICIENCY ON THE REPORT OF INSPECTION**

No.	Questions	Yes	No	N/A	Detention
1*	Has the ship been provided with approved stability information which can be understood and easily used by the Master and loading officer? (01326)				
2*	Is the data used in the stability check for departure complete and correct? (01316, 02134, 06102)				
3*	Does the ship comply with the stability criteria as applicable to the ship type? (02134)				
4*	Is there evidence to show that the Master or responsible officer can determine the stability of the ship under varying conditions of service using the approved stability information provided on board? (06107, 10133)				
5*	If the ship is provided with a Stability Instrument, is it approved by the Administration? (02103)				
6	If the ship is provided with a Stability Instrument, does the type of stability software in use meet the requirements for the relevant ship type? (02103)				

No.	Questions	Yes	No	N/A
7 Note 1	[Is there evidence on board to show that the master/loading officer confirms that the "calculated" displacement and trim corresponds with the "observed" draughts?]			
8 Note 1	[If the ship is provided with a Stability Instrument, has the accuracy of the stability instrument been verified periodically by applying at least one approved test condition?]			

**If "No" is ticked for questions marked with an asterisk "\*", the ship may be considered for detention**

Note 1: Questions 7 and 8 are for information purposes only.

## Annex 1.2 Inspections and detentions per Flag State

Table Annex 1.2

CIC-topic related deficiencies	(# 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)		Current position on WGB list
	2020	2021	2020	2021	2020	2021	
<b>Flag</b>							
Antigua and Barbuda	0	4	0	0	0	0	WHITE
Bahamas	0	3	0	0	0	0	WHITE
Belize	3	24	0	2	0	2	GREY
Cayman Islands (UK)	1	2	0	0	0	0	WHITE
China	0	8	0	0	0	0	WHITE
Cook Islands	0	1	0	0	0	0	GREY
Cyprus	1	1	0	0	0	0	WHITE
Denmark	0	1	0	0	0	0	WHITE
France	0	1	0	0	0	0	WHITE
Greece	0	3	0	0	0	0	WHITE
Hong Kong, China	4	38	0	0	0	0	WHITE
Indonesia	0	4	0	1	0	0	WHITE
Jamaica	0	1	0	0	0	0	BLACK
Japan	1	2	0	0	0	0	WHITE
Korea, Republic of	5	15	0	0	0	0	WHITE
Liberia	4	28	0	0	0	0	WHITE
Malaysia	0	1	0	0	0	0	WHITE
Malta	0	6	0	0	0	0	WHITE
Marshall Islands	5	35	0	0	0	0	WHITE
Mongolia	0	2	0	1	0	1	BLACK
Netherlands	0	1	0	0	0	0	WHITE
Niue	0	1	0	0	0	0	GREY
Norway	0	2	0	0	0	0	WHITE
Panama	24	92	0	2	0	1	WHITE
Philippines	0	1	0	0	0	0	WHITE
Portugal	0	4	0	0	0	0	WHITE
Russian Federation	0	1	0	0	0	0	WHITE
Sierra Leone	5	7	0	1	0	1	BLACK
Singapore	5	17	0	0	0	0	WHITE
Taiwan, China	0	1	0	0	0	0	WHITE
Thailand	0	3	0	0	0	0	WHITE
Togo	3	5	0	1	0	0	BLACK

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CIC-topic related deficiencies	(# 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)		Current position on WGB list
	2020	2021	2020	2021	2020	2021	
<b>Flag</b>							
Tuvalu	0	1	0	0	0	0	WHITE
Ukraine	0	4	0	0	0	0	-
United Kingdom	1	1	0	0	0	0	WHITE
Viet Nam	1	7	0	0	0	0	WHITE
<b>Grand Total</b>	<b>63</b>	<b>328</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>5</b>	

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