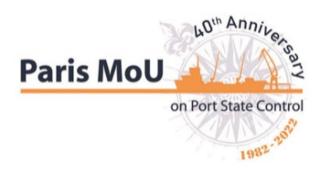
Report of the 2021 Concentrated Inspection Campaign (CIC) on Stability





Telephone: +31 70 456 1508 E-mail: secretariat@parismou.org Internet: www.parismou.org

Executive Summary

The Paris Memorandum of Understanding (Paris MoU) on Port State Control (PSC) carried out a Concentrated Inspection Campaign (CIC) on Stability in General jointly with the Tokyo MOU between September 1, 2021 and December 1, 2021. During the CIC, member States focussed on compliance with areas specified by the CIC during PSC inspections. This report documents the results of the campaign for the Maritime Authorities of the Paris MoU.

It was decided to instigate a Concentrated Inspection Campaign (CIC) on Stability in General in the Paris MoU region from the 1st September 2021 to 1st December 2021 in view of several recent stability related incidents. The primary contributing factor in all these incidents was a lack of assessment that the ship had adequate stability upon completion of cargo operations and before departure of the ship.

A CIC questionnaire was devised and was approved by the Paris MoU Port State Control Committee. The intention of the questionnaire was to lead the Port State Control Officer (PSCO) through a step-by-step process to:

- confirm that the ship staff are assessing the actual stability condition on completion of cargo operations before departure of the ship and on all stages of the voyage
- create awareness among ship staff and ship owners about the importance of calculating the actual stability condition of the ship on completion of cargo operations and before departure of the ship
- verify that the ship complies with intact stability requirements (and damage stability requirements, if applicable) under the relevant IMO instruments

The objective of the CIC was to check the level of compliance and create awareness with the requirements of Stability. Stability in general is considered an inspection item for PSC inspections. During the CIC, a total of 3995 inspections were carried out with the questionnaire. The CIC-topic detention rate in the period was 0.30% (12 ships were detained).

Of the CIC related detentions, the highest number of ships detained were Panama flagged (4). Azerbaijan, Comoros, Cyprus, Dominica, Egypt, Hong Kong (China), Marshall Islands and Norway each had one ship detained with a deficiency from this CIC as a ground for detention.

Of the Paris MoU member States, Italy raised the most CIC deficiencies (38), followed by Spain (32). Italy detained the highest number of ships for CIC-related deficiencies (6). It is important to note however that these numbers are not proportional to the number of inspections done by the countries.

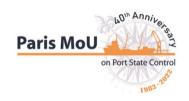
The evaluation of the CIC has shown some ambiguity regarding the results recorded based on the questionnaire. Whilst the outcome suggests good compliance, a wider review of inspection statistics within the time period indicated a differing narrative. Because the results appear inconclusive, they are only published on the Paris MoU website.

It is recommended that industry work with crews to raise awareness on the topics of the CIC particularly attention should be brought to the requirements that raised the most concern in the CIC (namely that the Master/Loading Officer confirms that the "calculated" displacement and trim corresponds with the "observed" draughts).



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1. Introduction

1.1 Purpose of this Report

The purpose of this report is to present the results of the CIC on Stability in General to both member States of the Paris MoU and the general public.

1.2 Objective of the CIC

The CIC aims at checking the conformity of the regulations related to Stability.

Objectives

The purpose of the campaign on ship's stability in general was:

- 1. to confirm that the ship staff are assessing the actual stability condition on completion of cargo operations before departure of the ship and on all stages of the voyage;
- 2. to create awareness among ship staff and ship owners about the importance of calculating the actual stability condition of the ship on completion of cargo operations and before departure of the ship:
- 3. to verify that the ship complies with intact stability requirements (and damage stability requirements, if applicable) under the relevant IMO instruments.

1.3 Scope of the CIC

The CIC was undertaken on all ships targeted for inspection within the Paris MoU Region between 1 September 2021 and 1 December 2021.

The CIC was designed to examine specific areas and not intended to detract from the normal coverage of PSC inspections. It was conducted in conjunction with the regular PSC targeting and inspection activities.

The CIC targeted two essential areas over 8 questions:

- Stability Information and how it used onboard
- The Stability Instrument

Paris MoU member States were provided with a standardised questionnaire format to record and report their results against the 8 targeted questions that comprised the CIC, and PSCOs were required to indicate if the ship was detained as a result of the CIC. For each "No" answer, PSCOs were directed to document the deficiency using the appropriate deficiency code on Form B of the PSC inspection report. In some cases (questions 1-6), a "No" answer could also be considered as grounds for a detention to be issued to the ship.

1.4 General Remarks

General remarks to be included in the report:

- For the purpose of this report, a detention is an inspection containing at least one deficiency in the area of the CIC that is considered a ground for detention.
- The tables do not consider inspections where the CIC questionnaire was not recorded, with exception of table 2.
- For each "No" answer, PSCOs were directed to document the deficiency using the appropriate deficiency code on Form B of the PSC inspection report. In some cases, a "No" answer could also be considered as grounds for a detention to be issued to the ship



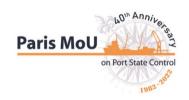
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2. Summary, Conclusions and Recommendations

2.1 Summary

The following summarizes the results of the CIC:

- Responses to Question 3 which asked whether the ship complied with stability criteria as applicable to ship type, reported the most favourable results 99.7% responded yes. This was closely followed with Question 4, which asked if there was 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 onboard, 99.4% responded yes. However, it is to be noted that whilst the compliance for Question 4 was high, it also led to the most detentions, suggesting that when it was wrong, it was badly wrong.
- The least favourable results were reported for Question 7, which asked whether there is evidence onboard to show that the Master/loading officer confirms that the "calculated" displacement and trim corresponds with the observed draughts 5.4% responded no.
- This was followed by Question 8, which asked whether the accuracy of the Stability Instrument (if provided) is verified periodically by applying at least one approved test condition 4.8% responded no.
- Question 6 and 7 had the highest "n/a" response (19.7% & 19.6% respectively), this is due to the questions referring to stability instruments (if fitted).
- Of the 138 ships detained during the CIC, 12 were related to the CIC topic representing 8.7% of total detentions and 0.3% of all inspections in the time period.
- The overall detention rate as percentage of inspections was 3.3%.
- The overall CIC-topic detention rate as related to percentage of inspections was 0.28%.
- The majority of the vessels with deficiencies marked as grounds for detention were in the Standard Risk category.
- By ship type, General cargo/multipurpose had the highest CIC-topic related detention rate (42%), followed by Container (25%), and Bulk Carrier (17%). A number of ship types had zero CIC-topic related detentions.
- By ship age, younger ships (<6 years) had the lowest detention rate for CIC-topic detentions (0%) while the highest rate peaked for ships aged 13-18 years (42%).
- Of the ships with CIC related grounds for detention, the highest number of ships detained were Panama flagged (4). Azerbaijan, Comoros, Cyprus, Dominica, Egypt, Hong Kong (China), Marshall Islands and Norway each had one ship detained with a deficiency from this CIC as a ground for detention.
- The Flag administrations which had CIC topic detentions were a mix of White, Grey, Black and not listed in the Paris MOU WGB list and no trend could be discerned.



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2.2 Conclusions

Stability in General has always been a part of the items for PSC inspections. The Tokyo MoU and the Paris MoU have conducted a joint CIC of the stability in general.

The objective of the CIC was to provide indications as to the industry's level of compliance with specific aspects of Stability.

The overall detention rate regarding CIC topic related detentions is 0.3%.

The evaluation of the CIC has shown some ambiguity regarding the results recorded based on the questionnaire. Whilst the outcome suggests good compliance, a wider review of inspection statistics within the time period indicated a differing narrative. Because the results appear inconclusive, they are only published on the Paris MoU website.

2.3 Recommendations

It is recommended that industry work with crews to raise awareness on the topics of the CIC. Particular attention should be brought to the requirements that raised the most concern in the CIC (namely that the Master/Loading Officer confirms that the "calculated" displacement and trim corresponds with the "observed" draughts).

3. CIC Questionnaire Results

3.1 Analysis

The CIC on Stability in General was executed from the 1 September to 1 December 2021.

The analysis is done on the results of the CIC questionnaire and on the data in the inspections database.

The results show 4212 inspections. 217 of those inspections have been done without questionnaire due to earlier inspections and EU inspection requirements that exempt ROPAX type of ships from Paris MoU port State control inspection.

4212 inspections have been performed with the CIC questionnaire. In 11 of such cases (0.26%) it is mentioned the ship should be detained as a result of the CIC.

In general the percentage of detentions due to the CIC, did not lead to a higher percentage of the average detention percentage.

3.1.1. Response to CIC questionnaire

The following table (Table 1) shows the results on the CIC questionnaire. For the 3995 inspections using the questionnaire the results are divided in "Yes", "No", "N/A" and "Blank". There are no specific results in "N/A" or "Blank" that need specific attention.



Table 1 Response to CIC questionnaire:

		nr Yes	"/Total Y+N"	nr No	"/Total Y+N"	nr N/A	"/Line lotal Insp"	Nr Blank	"/Line lotal Insp"	Nr Detained	"Dets/Total Q CIC"
		Meas	sured over ansv	•	and No		Meas	ured over	Total of C	IC Inspection	าร
Nr.	CIC on Stability	'YE	'YES'(1)		`NO'(1)		A(2)	Blank(2)		Detained	
		#	%	#	%	#	%	#	%	#	% of CIC
1*	Has the ship been provided with approved stability information which can be understood and easily used by the Master and loading officer?	3927	98.5%	58	1.5%			4	0.1%	6	0.2%
2*	Is the data used in the stability check for departure complete and correct?	3908	98.0%	79	2.0%			4	0.1%	4	0.1%
3*	Does the ship comply with the stability criteria as applicable to the ship type?	3976	99.7%	12	0.3%			5	0.1%	2	0.1%
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?	3959	99.4%	25	0.6%			4	0.1%	7	0.2%
5*	If the ship is provided with a Stability Instrument, is it approved by the Administration?	3117	97.3%	85	2.7%	789	19.7%	4	0.1%		
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?	3180	99.2%	26	0.8%	785	19.6%	4	0.1%		
7	[Is there evidence on board to show that the master/loading officer confirms that the "calculated" displacement and trim corresponds with the "observed" draughts?]	3773	94.6%	216	5.4%			6	0.2%		
8	[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?]	3099	95.2%	157	4.8%	733	18.3%	6	0.2%		

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

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

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



3.1.2. Analysis of answers to questionnaire in relation to detention

Question 4 regarding the ability of the Master or responsible officer to determine the ship stability under varying conditions of service provided the most detainable deficiencies (7). Question 1 followed with 6 detainable deficiencies around the approved stability information which can be understood and easily used by the Master and loading officer. It is of interest to note that both questions would come down to the professional judgement of the Port State Control Officer to assess.

3.1.3. Analysis of CIC-topic related deficiencies, including ISM related deficiencies

The data extract for this report did not specify which deficiencies were ISM related. Analysis of CIC topic related deficiencies showed that many deficiencies of this type were raised against different code and convention combinations to that required by the CIC, and as such were excluded from this analysis.

3.1.4. Number of inspections in CIC

(Table 2)

rubic 2)	INSPECTIONS WITH A CIC QUESTIONNAIRE	INSPECTIONS WITHOUT A CIC QUESTIONNAIRE
TOTAL	3995	217
DETENTIONS	121	17
DETENTIONS WITH CIC- TOPIC RELATED DEFICIENCIES	11	1

3.1.5. Specification of CIC-topic related deficiencies

(Table 3)

CIC-1	opic related deficiencies	(# inspection this deficion One ins can l multi deficion	ciency) pection nave tiple	(# inspection this def record grour deter	ficiency ded as nd for	inspection this def	ficiency ded as nd for on and	
	Deficiency	Convention	2020	2021	2020	2021	2020	2021
1326	Stability Information Booklet	01021	12	53	4	2		
1326	Stability Information Booklet	02000	15	34	2	7	1	
1326	Stability Information Booklet	13172		1				
2103	Stability/strength/loading information and instruments	01021	17	89	3	3		
2103	Stability/strength/loading information and instruments	01120	3	16				
2103	Stability/strength/loading information and instruments	04010	1	14				
6102	Grain	13140		2				



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Grand		48	209	0	12		
Total		40	209	9	12	_	

^{*} Include also Inspections without a CIC questionnaire

Note: There are a number of deficiencies and conventions, which are included in this CIC, for which no registration took place during the CIC period month 9 to 11 in 2021. Also no registrations on these deficiencies and conventions were observed in the same period in 2020 either. According to the Questionnaire input there are 658 deficiencies and 19 detainable deficiencies in the CIC period in 2021. It is possible that they are recorded on other codes than included in this CIC. The in Thetis recorded 209 deficiencies are 32% of the 658 Questionnaire recordings.

3.1.6. Number of inspected ships per Ship Risk Profile

(Table 4)

Table 4 Number of inspected ships per Ship Risk Profile shows that the majority of the vessels with CIC deficiencies and CIC related detentions were Standard Risk. However, looking at the overall spread they make up the majority of the inspections.

CIC-topic related deficiencies (Thetis)*	(# of inspections with this deficiency) One inspection can have multiple deficiencies		(# of inspe this def recorded as deter	iciency ground for	(# of inspe this def recorded as detentior rela	iciency ground for and RO
Ship risk profile	2020	2021	2020	2021	2020	2021
HRS	2	18	1	2		
SRS	43	180	7	10	1	
LSR		6				
UNKNOWN	3	5	1			
Grand Total	48	209	9	12	1	

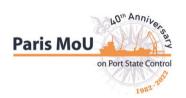


3.1.7. Number of inspected ships and detentions per ship type

(Table 5)

CIC-topic related deficiencies (Thetis)*	(# 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)			deficiency as ground ntion and		
Ship risk profile	2020	2021	2020	2021	2020	2021
Bulk carrier	6	47		2		
Chemical tanker	5	9				
Commercial yacht	3					
Container	5	22	1	3		
Gas carrier		3				
General cargo/multipurpose	13	64	3	5		
Heavy load		1				
High speed passenger craft		1				
Offshore supply	3	7	1	1		
Oil tanker		15				
Other	3	16	1			
Other special activities	8	5	3	1	1	
Refrigerated cargo		4				
Ro-Ro cargo		5				
Ro-Ro passenger ship	1	7				
Special purpose ship		1				
Tug	1	2				
Grand Total	48	209	9	12	1	

Note: Covid-19 limited some ship types inspections like passenger ships.



3.1.8. Inspections and detentions per Flag State

(see Annex 1.2)

Of the ships with CIC related grounds for detention, the highest number of ships detained were Panama flagged (4). Azerbaijan, Comoros, Cyprus, Dominica, Egypt, Hong Kong (China), Marshall Islands and Norway each had one ship detained with a deficiency from this CIC as a ground for detention.

The Flag administrations which had CIC topic detentions were a mix of White, Grey, Black and not listed in the Paris MOU WGB list and no trend could be discerned.

3.1.9. Ship age overview

(Table 6)

CIC-topic related deficiencies (Thetis)*	this deficient inspection	ections with ency) One can have eficiencies	(# of inspe this def recorded as deter	ground for	this del recorded as detention	ections with ficiency ground for and RO ted)		
Ship risk profile	2020	2021	2020	2021	2020	2021		
00 - 06	8	26	1					
07 - 12	13	45		1				
13 - 18	8	71	2	5				
19 - 24	6	24		2				
25 - 30	3	18		1				
31 - 36	3	6	3	1	1			
37 ∞	7	19	3 2		3 2			
Grand Total	48	209	9	12	1			



Annex 1

Annex 1.1 Inspection form of the CIC

Questionnaire for the Inspection Campaign on Ship's Stability in general									
Objete									
Ship's name									

IMO No.	
Date of Inspection	

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?				
2*	Is the data used in the stability check for departure complete and correct?				
3*	Does the ship comply with the stability criteria as applicable to the ship type?				
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?				
5*	If the ship is provided with a Stability Instrument, is it approved by the Administration?				
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?				

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

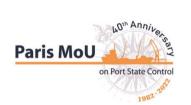
Note 1: For Paris MoU, questions 7 and 8 are for information purposes only.



Annex 1.2 Inspections and Detentions per Flag State

Table Annex 1.2 Inspections and detentions per Flag State

CIC-topic related deficiencies (Thetis)* Ship risk profile	(# 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
Algeria		2					Grey
Antigua and Barbuda		8					White
Azerbaijan		1		1			Grey
Bahamas	1	5					White
Barbados	1	3					White
Belgium		1					White
Bolivia		1					Not Listed
Cameroon	1						Black
Cayman Islands, UK	1						White
Comoros	1	4	1	1			Black
Croatia		1					White
Cyprus		4		1			White
Denmark	1	4					White
Dominica		2		1			Not Listed
Egypt		1		1			Grey
Faroe Islands		1					White
Finland		4					White
France	1						White
Germany	2	1	2				White
Gibraltar, UK	1	1					White
Greece		5					White
Hong Kong (China)	2	4		1			White
Iran, Islamic Republic of		1					Grey
Isle of Man, UK		1					White
Italy		2					White
Latvia	1	2					White
Liberia		22					White
Lithuania	1	1					White



CIC-topic related deficiencies (Thetis)*	(# 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
Ship risk profile	2020	2021	2020	2021	2020	2021	150
Malta	7	14	1				White
Marshall Islands	4	28	1	1			White
Moldova, Republic of		4					Black
Monaco	1						Not Listed
Netherlands	4	10					White
Nigeria	2		2		1		Not Listed
Norway	2	7	1	1			White
Palau		1					Grey
Panama	6	36		4			White
Philippines	1	1					Grey
Poland		1					Grey
Portugal	1	5					White
Russian Federation		4					White
Saint Vincent and the Grenadines	1						Grey
Sierra Leone		1					Black
Singapore		5					White
Togo	1						Black
Turkey		4					White
Ukraine		2					Grey
United Kingdom	3	2	1				White
Vanuatu	1	2					Grey

The data presented in Annex 2 is based on the inspection and detention data as recorded in the information system.