

**ANNUAL REPORT
ON
PORT STATE CONTROL
IN THE ASIA-PACIFIC REGION**

2022



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FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2022**.

In 2022, although the COVID-19 pandemic persisted, the impacts and restrictions became less stringent in the majority areas around the world. In line with other regions, the activities of the Tokyo MOU have further recovered along with the relaxation of restrictions.

In order to reduce the impacts to the shipping industry due to the COVID-19 pandemic, the Tokyo MOU adopted and implemented measures for facilitating port State Authorities to apply pragmatic flexibility during PSC inspections. Although the shipping industry as a whole continued to carry out their responsibilities and obligations in the normal manner as required, there were still a number of ships, their companies, flag States and/or Recognized Organizations (ROs) that took the pandemic circumstance as an excuse and loophole for compromising their obligations to comply with the relevant and applicable international maritime standards and requirements.

Concerns have been raised by a number of the Tokyo MOU Authorities that there are increasing ship incidents due to lack of effective maintenance of main engines and power generation systems including poor implementation of planned maintenance. This situation poses serious risks to safety of ships and the marine environment. In response, the Tokyo MOU Authorities have increased focus on planned maintenance during inspections. It is noted that, as the result, there is a significant increase of ISM detentions and RO responsible detentions. Tokyo MOU would like to bring the matter to the attention of the industry to increase awareness and to reinforce the circle of responsibility so as to improve the situation.

This Annual Report provides the overview of port State control activities and developments in the Tokyo MOU in 2022. The report also includes port State control statistics and analysis on the results of inspections carried out by member Authorities during the year.

Finally, we would like to extend our sincere thanks to the Port State Control Committee, member Authorities and all PSC officers for the devoted efforts made, the valuable cooperation rendered and the respectable work done, which demonstrate the strong potential and enduring driver for the development and achievement of the Tokyo MOU.



A handwritten signature in blue ink that reads "K. W. Crawford". The signature is written in a cursive, flowing style.

Kenny Crawford
Chair
Port State Control Committee



A handwritten signature in blue ink that reads "H. Kubota". The signature is written in a cursive, flowing style.

Kubota Hideo
Secretary
Tokyo MOU Secretariat

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OVERVIEW

GENERAL INTRODUCTION

The Annual Report on Port State Control in the Asia-Pacific Region is published under the auspices of the Port State Control Committee of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU). This annual report is the twenty-eighth issue and covers port State control activities and developments in the 2022 calendar year.

The Memorandum was signed in Tokyo on 1 December 1993 and came into effect on 1 April 1994. In accordance with the provisions of the Memorandum, Authorities that have signed and formally accepted the Memorandum or that have been accepted by unanimous consent of the Port State Control Committee become full members. Currently, the Memorandum has 21 full members, namely: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam. A maritime Authority that has declared its intention to fully adhere to the Memorandum at least for a three-year period may be accepted as a co-operating member by unanimous consent of the Port State Control Committee. Mexico is participating in the Tokyo MOU as a co-operating member Authority since 2018.

The main objectives of the Memorandum are to establish an effective port State control regime in the Asia-Pacific region through co-operation of its members, harmonization of the members' activities, to eliminate substandard shipping, to promote maritime safety and security, to protect the marine environment and to safeguard seafarers' working and living conditions on board ships.

The Port State Control Committee established under the Memorandum monitors and controls the implementation and on-going operation of the Memorandum. The Committee consists of representatives from the member Authorities, co-operating member Authorities and observers. Observer status has been granted to the following maritime Authorities and inter-governmental organizations by the Committee: Cambodia, Democratic People's Republic of Korea, Macao (China), Samoa, Solomon Islands, Tonga, the United States Coast Guard, the International Maritime Organization (IMO), the International Labour Organization (ILO), the Abuja MOU, the Black Sea MOU, the Caribbean MOU, the Indian Ocean MOU, the Mediterranean MOU, the Paris MoU, the Riyadh MOU and the Viña del Mar Agreement. The Secretariat of the Memorandum is located in Tokyo, Japan. The Asia-Pacific Computerized Information Centre is established in Moscow, Russian Federation.

For the purpose of the Memorandum, the following instruments are the basis for port

State control activities in the region:

- the International Convention on Load Lines, 1966, as amended;
- the Protocol of 1988 relating to the International Convention on Load Lines, 1966, as amended;
- the International Convention for the Safety of Life at Sea, 1974, as amended;
- the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974;
- the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974;
- the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto, as amended;
- the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers, 1978, as amended;
- the Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended;
- the International Convention on Tonnage Measurement of Ships, 1969;
- the Merchant Shipping (Minimum Standards) Convention, 1976 (ILO Convention No. 147);
- the Maritime Labour Convention, 2006, as amended;
- the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001, as amended;
- the Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969; and
- the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, as amended.

REVIEW OF YEAR 2022

In the year 2022, the activities of the Tokyo MOU have been further recovered or resumed as the situation of the COVID-19 pandemic became more stable and the restrictions imposed became lesser. It is encouraging that, comparing with the last year, the physical initial inspections have been increased by 3,373 in number or 17.75% in percentage; that four expert mission trainings were able to be conducted in the face-to-face style and the general training course via virtual means was organized and, that the Port State Control Committee, the executive body of the Tokyo MOU, was able to meet physically, after two years of virtual sessions, to discuss important matters for the operation of the Tokyo MOU efficiently and effectively.

It is extremely unfortunate that the Tokyo MOU PSC database, APCIS, suffered an outage in July 2022 due to the unforeseen reason, likely a cyber-attack. The failure resulted the unavailability of the whole system

for a couple of weeks and the restoration of full data for several months, which not only caused serious difficulties for Authorities and PSCOs to make accurate and effective selection of ships for inspection and to transmit inspection data efficiently and timely, but also created inconveniences for various parties, individuals and users from the industry, who regularly view and check Tokyo MOU PSC data. Taking the lesson from this incident, the Tokyo MOU will pay higher attention to the matter of cyber-risks and take all possible measures to enhance cyber security to prevent the recurrence.

The concentrated inspection campaign (CIC) on STCW was conducted from 1 September to 30 November 2022 jointly with the Paris MoU. During the CIC period, a total of 6,953 PSC inspections were conducted by the member Authorities, of which 5,908 (84.97%) were with a CIC inspection. A total of 1,041 CIC related deficiencies were found on 802 ships representing 13.57% of the CIC inspections. The highest number of CIC

related deficiencies were relating to the Records of rest 289 (27.76%), followed by Voyage or passage plan 253 (24.30%) and Crew familiarization with Emergency Systems 114 (10.95%). 20 (0.34%) of the 5,908 ships subject to a CIC inspection were detained for CIC related deficiencies. Comparing with 232 detentions out of 6,953 inspections or 3.34% detention rate during the period, the outcome of the campaign appears to indicate a relatively high level of compliance with STCW. Other regional PSC regimes of the Abuja MOU, the Black Sea MOU, the Indian Ocean MOU, the Mediterranean MOU, the Riyadh MOU and the Viña del Mar Agreement also conducted the CIC in the same manner.

THE PORT STATE CONTROL COMMITTEE

The thirty-third meeting of the Port State Control Committee was held in Lima, Peru, from 14 to 17 November 2022, with hybrid participation. The meeting was hosted by the General Directorate of Captaincies and Coast Guards (DICAPI) of Peru. The meeting was



The thirty-third Committee meeting, Lima, November 2022.

chaired by Mr. Kenny Crawford, Deputy Chief Executive Technical Advice and Support, Maritime New Zealand.

The thirty-third meeting of the Port State Control Committee was attended by member Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Singapore, Thailand and Viet Nam; a co-operating member Authority of Mexico; and observers of Cambodia, Macao (China), Samoa, Tonga, the United States Coast Guard, the Black Sea MOU, the Indian Ocean MOU, the Paris MoU, the Viña del Mar Agreement (represented by Chile), ILO and IMO.

The Committee considered and agreed to the arrangement for application of full membership and assessment of compliance by Mexico, taking account of its satisfactory progress during the 4 years activities as a Co-operating Member Authority. The Committee considered the application for observer status by the Mediterranean MOU and unanimously agreed to grant the observer status to the Mediterranean MOU. For facilitating the Tokyo MOU in playing a more active role among regional PSC regimes, the Committee approved the proposal by the Secretariat for obtaining observer status at the Abuja MOU, the Black Sea MOU and the Mediterranean MOU, where the Tokyo MOU has not yet associated formally.

The Committee considered and adopted the amendment to the Memorandum for inclusion of the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunker 2001) as a relevant instrument. The amendment will become effective on 1

January 2024. The Committee agreed to consider and adopt PSC guidelines on Bunker 2001 at the next meeting.

The Committee considered and approved the final report of the 2021 CIC on Stability in General. The Committee confirmed the arrangement for the joint CIC on Fire Safety in 2023. The Committee considered preparations for the joint CIC on Crew Wages and Seafarer Employment Agreement under MLC in 2024. Relating to the 2024 CIC, the Committee agreed to prepare and issue a circular, in the similar manner as the Paris MoU, for early implementation of 2022 amendments to MLC relating to financial security. The Committee also discussed potential topics, which may be taking up for future CICs.

For the purpose of appropriately addressing the new challenges for the Tokyo MOU and exploring the relevant countermeasures, the Committee decided to consider amendments to the strategic plan and actions. The Committee considered the follow-up action items from the 3rd Joint Ministerial Conference. For facilitating consideration and review of follow-up actions, the Committee decided to develop a new framework on follow-up actions. The Committee considered and approved the revision of the plan for technical co-operation programmes. The Committee considered and adopted the amendments to the Rules of Procedure for introducing the policy to allow the online participation in the meeting during the transition period back to “normal” from the COVID-19 pandemic.

The Committee noted the ongoing discussions of the intersessional group on new inspection regime (NIR) for review of method of assessment of performance of flag and RO. The Committee was informed of the progress

on preparation and development of arrangements for carrying out PSC on fishing vessels made by the intersessional group on fishing vessel. The Committee received a report about the outage of the APCIS system happened in July 2022. The Committee discussed and decided to develop the relevant countermeasures to improve cyber security at the higher priority to prevent the recurrence.

Moreover, the Committee also gave consideration and made decisions on the following:

- adoption of the PSC guidelines for inspection of fixed fire-extinguishing system, the guidelines for the use of electronic certificates and the guidelines for PSCOs for onboard blackout test;
- establishment of new intersessional groups for development of guidelines for PSC on IGC Code and, for consideration of pre-inspection examination of certificates/ documentation electronically for normal PSC inspections and for inspection of electronic records relating to MARPOL and/or other conventions;
- approval of response to issues/requests raised by the industry organizations at the previous forum in October 2019;
- awarding the winner of the deficiency photo of the year and adoption of amendments to the procedures for the deficiency photo of the year; and
- consideration of the matter of enhancing accessibility and availability of the Tokyo MOU PSC data.

In accordance with the new arrangements/

scheme adopted by the Committee, a session of forum with the industry was conveyed in conjunction with the Committee meeting in Lima, Peru. The forum was attended by representatives of ACS, IACS, ICS, ITF and INTERTANKO in-person or remotely via virtual means respectively.

The thirty-fourth meeting of the Port State Control Committee will be held in Yokohama, Japan, from 30 October to 2 November 2023.

TECHNICAL WORKING GROUP (TWG)

The sixteenth meeting of the Technical Working Group (TWG) was held in Lima, Peru, from 10 to 11 November 2022 in the hybrid mode, prior to the thirty-third meeting of the Port State Control Committee. The TWG16 meeting was chaired by Mr. Hu Ronghua, Deputy Director, Division of Ship Registry and Supervision, Shanghai Maritime Safety Administration (MSA) of China.

The TWG meeting discussed and made recommendations to the Committee on matters relating to:

- reports of intersessional groups: advisory group on information exchange (AG-IE), intersessional group on batch protocol (IG-BP), intersessional group on statistics (IG-Statistics), intersessional group on distance learning programmes (IG-DLP), Intersessional Group on Fixed Fire-extinguishing System (IG-FFS) and Intersessional Group on Black Out Test (IG-BOT);
- cases considered by the detention review panel;
- periodical revision of the PSC Manual;

- development and review of PSC guidelines;
- preparation and arrangements for upcoming CICs;
- activities and operation of the Asia-Pacific Computerized Information System (APCIS);
- management and maintenance of the coding system;
- analysis and statistics on PSC; and
- reports and evaluations of technical co-operation activities.

ASIA-PACIFIC COMPUTERIZED INFORMATION SYSTEM (APCIS)

For reporting and storing of port State inspection results and facilitating exchange of information in the region, a computerized database system was established. The central site of the APCIS is located in Moscow, under the auspices of the Ministry of Transport of Russian Federation.

The APCIS is connected by member Authorities on-line or by batch protocol for searching ships for inspection and for inputting and transmitting inspection reports. The APCIS also supports on-line publication of PSC data on the Tokyo MOU website (<https://www.tokyo-mou.org>) on a real time basis. Based on data stored in the database, the APCIS produces annual and detailed PSC statistics.

For inter-regional information exchange, the

APCIS has established deep hyperlinks with the databases of:

- THETIS of the Paris MoU;
- BSIS of the Black Sea MOU;
- IOCIS of the Indian Ocean MOU;
- CIALA of the Viña del Mar Agreement; and
- CMIC of the Caribbean MOU.

Furthermore, the PSC data of the Tokyo MOU are also provided to IMO GISIS and EQUASIS.

TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS

After two years' suspension, the tenth general training course for PSC officers was organized from 6 June to 24 August 2022 via virtual means, instead of face-to-face style due to the continuous impacts of the COVID-19. A total of 26 PSC officers participated in the training course. Twenty-one of them were from the Tokyo MOU region: Cambodia, Chile, China, Fiji, Republic of Korea, Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Solomon Islands, Thailand, Vanuatu and Viet Nam; and five of them were nominated from the Black Sea MOU, the Caribbean MOU, the Indian Ocean MOU, the Mediterranean MOU and the Riyadh MOU. The course was conducted by the Tokyo MOU, with the full support by the Ministry of Land, Infrastructure, Transport and Tourism of Japan (MLIT) and the extensive assistance by the Shipbuilding Research Centre of Japan (SRC).

The training course consisted of a two-month pre-learning course and 17 days online classroom lectures. During the pre-learning period, the participants were requested to



The tenth general training course for PSC officers via virtual means.

complete 32 pre-learning modules and the tests through the e-learning system developed for the Distance Learning Programme (DLP). Upon completion of the pre-learning, participants were arranged to attend the online classroom lectures, which provided a wide range of lectures related to IMO and ILO conventions and regulations relevant to PSC implementation. Experts from MLIT, SRC and the Secretariat delivered lectures on the relevant subjects.

The twenty-ninth seminar for PSCOs was organized remotely via virtual means from 12 to 14 July 2022, instead of the originally planned normal physical seminar in the Russian Federation, due to the COVID-19 pandemic and other unforeseen factors. Participants from Authorities of Australia, Cambodia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Macao (China), Malaysia, Marshall Islands, Mexico, Panama, Papua New Guinea, Peru, Russian Federation, Samoa, Singapore,

Thailand, Vanuatu and Viet Nam attended the seminar. Representatives from the Secretariat of Abuja MOU, from Belize representing the Caribbean MOU and from Bangladesh and Seychelles representing the Indian Ocean MOU also participated in the seminar. The major topics of the seminar were Results of the CIC on Stability in General 2021, CIC on STCW 2022, Introduction of Guidelines related to Fixed CO₂ Fire-extinguishing System, Introduction of Deficiency Writing Guidelines and Introduction of guidance for inspection of UNSP Barges and for exercise of



The twenty-ninth seminar for PSC officers via virtual means

control over Statement of Compliance – Fuel Oil Consumption Reporting (due to change Flag or Company). Experts from Australia, China, Japan, Marshall Islands and the Secretariat delivered the presentations on the relevant topics.

Four expert missions were carried out in 2022, in the normal face-to-face style. The first and the second missions were conducted from 5 to 9 September 2022 in Malaysia and in Philippines respectively. The third mission was conducted from 19 to 23 September 2022 in Thailand. The fourth mission was conducted from 21 to 23 September 2022 in Viet Nam. All four missions were delivered by experts from Japan. All four missions were implemented as the activity to support them to realize the final stage of the MEPSEAS Project: pilot launch of PSC inspection in key ports.

The second Seminar for Flag Performance Improvement, which is funded by the Nippon Foundation and was originally scheduled in February 2020 but postponed for two years due to the COVID-19 pandemic, was held in Da Nang, Viet Nam, from 5 to 9 December 2022. Officials involved in flag Administrations policy of Cambodia, Kiribati, Mongolia and Palau attended the Seminar. The Authority of Viet Nam provided full support to the Seminar. Experts from Japan, Singapore, Thailand and Viet Nam, and the Nippon Kaiji Kyokai (Class NK), the IMO Secretariat and the Tokyo MOU Secretariat gave lectures at the Seminar.

During the past three years, the Tokyo MOU was unfortunately forced to implement the technical co-operation activities via virtual means due to the COVID-19 pandemic. However, from the positive aspect, such a situation enabled the Tokyo MOU to have the alternative or the additional option to enhance



Flag Performance Improvement Seminar

the technical co-operation programmes. The incessant implementation of the technical co-operation programmes and the continuous kind funding by the Nippon foundation received full support by all Authorities.

CO-OPERATION WITH OTHER REGIONAL PORT STATE CONTROL REGIMES

Establishment and effective operation of regional co-operation regimes on port State control has formed a worldwide network for elimination of substandard shipping. Currently, there are a total of nine regional port State control regimes (MOUs) covering major part of the world, namely:

- Abuja MOU
- Black Sea MOU
- Caribbean MOU
- Indian Ocean MOU
- Mediterranean MOU
- Paris MoU
- Riyadh MOU
- Tokyo MOU
- Viña del Mar Agreement

As one of the inter-governmental organizations (IGOs) associated with IMO, the

Tokyo MOU has attended meetings of the Flag State Implementation (FSI) Sub-Committee and Implementation of IMO Instruments (III) Sub-Committees since 2006. The Tokyo MOU Secretariat participated in the eighth session of III Sub-Committee which was held in hybrid style from 25 to 28 July 2022.

In support of inter-regional collaboration on port State control, the Tokyo MOU holds observer status within the Paris MoU, the Caribbean MOU, the Indian Ocean MOU, the Viña del Mar Agreement, and the Riyadh MOU and, in accordance with the decision of the Port State Control Committee, the Tokyo MOU will also obtain observer status at the Abuja MOU, the Black Sea MOU and the Mediterranean MOU. In a similar manner, the Tokyo MOU has granted observer status to all the aforementioned regional PSC regimes.

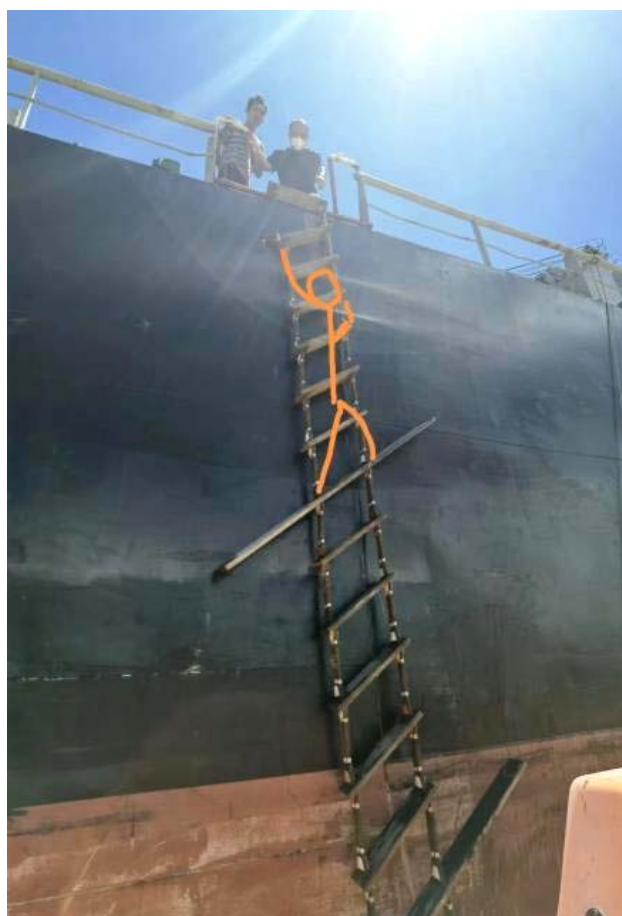
The Tokyo MOU has established, and maintained, effective and close co-operation with the Paris MoU at both administrative and technical levels. Representatives of the two Secretariats attend the Port State Control Committee meetings of each MOU on a regular basis. During period of 2022, the Tokyo MOU Secretariat attended the 55th meeting of the Paris MoU PSC Committee remotely, which was held from 16 to 20 May 2022 in Bucharest, Romania, in hybrid style.

In addition, the Tokyo MOU Secretariat participated in the 27th meeting of the Caribbean MOU PSC Committee remotely, which was held on 21 - 23 June 2022 in Miami with virtual participation arrangement.

PORT STATE CONTROL UNDER THE TOKYO MOU, 2022

INSPECTIONS

In 2022, 24,894 inspections, involving 15,853 individual ships, were carried out on ships registered under 99 flags. As shown in Table 2b, 2,515 or 10.10% inspections were remote inspections. Figure 3 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. It would be noted that inspections for some



Winner of Deficiency Photo of the Year – 2022
(Ship type: General cargo/multi-purpose ship;
Date: 03/08/2022; Port: Shanghai)



Candidate photo for Deficiency Photo of the Year
(Ship type: General cargo/multi-purpose ship;
Date: 04/04/2022; Port: Nakhodka)

member Authorities were still limited due to the prolongation of the COVID-19 pandemic. Out of 24,894 inspections, there were 12,678 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 26,259*, the inspection rate in the region was approximately 60%** in 2022 (see Figure 1).

Information on inspections according to ships' flag is shown in Table 4.

Figure 2 and Table 3 provide information on inspections per ship risk profile.

Figures summarizing inspections according to ship type are set out in Figure 4 and Table 5.

Inspection results regarding recognized

* Number of individual ships which visited the ports of the region during the year (the figure was provided by LLI).

** The inspection rate is calculated by number of individual ships inspected/number of individual ships visited.



Candidate photo for Deficiency Photo of the Year
(Ship type: General cargo/multi-purpose ship;
Date: 12/11/2022; Port: Shanghai)

organizations are shown in Table 6.

DETENTIONS

A ship is detained when the condition of the ship or its crew does not correspond substantially with the applicable conventions. Such strong action is to ensure that the ship cannot sail until it can proceed to sea without presenting a danger to the ship or persons on board, and/or without presenting an unreasonable threat of harm to the marine environment.

In 2022, 725 ships registered under 56 flags were detained due to serious deficiencies having been found onboard. The detention rate of ships inspected was 2.91%.

Figure 5 shows the detention rate by flag for flags where at least 20 port State control inspections had been conducted and whose detention rate was above the average regional rate. Figure 6 gives the detention rate by ship type. Figure 8 illustrates the most frequent detainable deficiencies found during inspections in 2022.

For the purpose of targeting the ship to be

inspected, the Black-grey-white list (Table 8) indicates levels of performance of flags over a three-year rolling period. Flags, whose ships were involved in 30 or more inspections during the period, are included in the list. The black-grey-white list for 2020-2022 consists of 56 flags. The number of flags in the black list is 4, one flag increased than the last year. The number of flags on the grey list remains 16 flags. The white list includes 36 flags, one less than the previous year.

A list of under-performing ships (i.e., ships detained three or more times during previous twelve months) is published monthly. A total of 33 vessels, involving 8 individual ships, were identified as under-performing ships in 2022. The list of under-performing ships is provided in Table 16.



Candidate photo for Deficiency Photo of the Year
(Ship type: Heavy load carrier; Date: 26/07/2022;
Port: Shanghai)



Candidate photo for Deficiency Photo of the Year
(Ship type: Bulk carrier; Date: 04/06/2022;
Port: Newcastle, NSW)

DEFICIENCIES

Where conditions on board are found that are not in compliance with the requirements of the relevant instruments by the port State control officers, these are recorded as deficiencies and required to be rectified.

A total of 46,769 deficiencies were recorded in 2022. The deficiencies found are categorized and shown in Figure 7 and Table 7.

It has been noted that fire safety measures, safety of navigation and life-saving appliances continue to be the top three categories of deficiencies discovered on ships. In 2022, 7,107 deficiencies related to fire safety measures, 6,405 deficiencies related to safety of navigation and 5,918 deficiencies related to life-saving appliances were recorded, representing nearly 42% of the total number of all recorded deficiencies. It is noted that the categories of deficiencies on ship documents, emergency systems and safety of navigation increased in 2022, as the results of the CIC on STCW, during which items of records of rest/minimum hours of rest, crew familiarization

with emergency systems, voyage/passage plan and establishment of working language had been checked.

DEFICIENCY PHOTO OF THE YEAR

The function for collecting and storing deficiency photos taken during PSC inspections in the APCIS has been implemented since 2009. For encouraging and promoting PSC officers to submitting deficiency photos, a prize of deficiency photo of the year has been established to award the PSC officer who took the best photo of deficiency in the year. Deficiency photo of the years are also published on the Tokyo MOU website.

In 2022, a total of 7,696 photos were submitted by PSC officers. In accordance with the procedures for selection of deficiency photo of the year, the photo taken by PSC officer of the Authority of China was selected as the winner for 2022. Deficiency photo of the year – 2022 and other candidate photos are provided in this section.

OVERVIEW OF PORT STATE CONTROL RESULTS 2012 – 2022

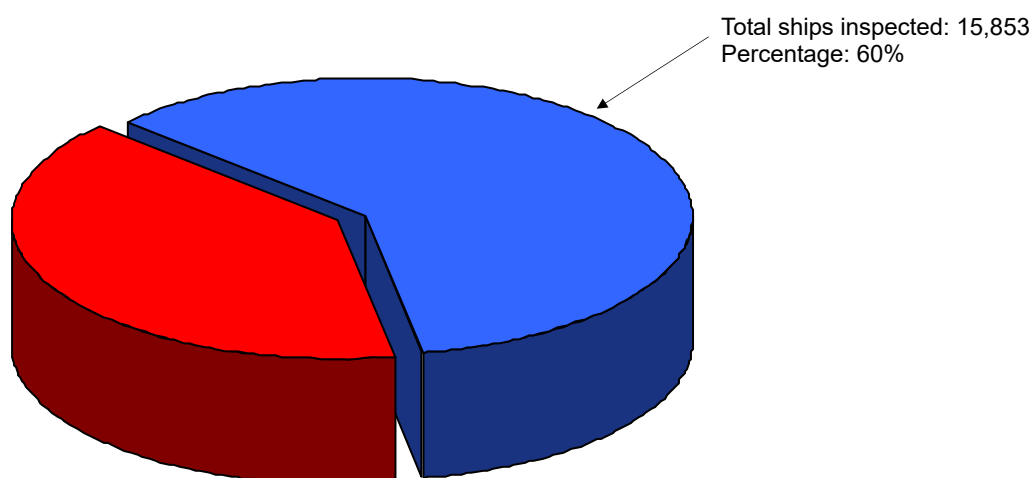
Figures 9-14 show the comparison of port



Candidate photo for Deficiency Photo of the Year
(Ship type: General cargo/multi-purpose ship;
Date: 04/08/2022; Port: Brisbane, QLD)

State inspection results for 2012 - 2022.
These figures indicate the trends in port State
activities and ship performance over the past
eleven years.

Figure 1: INSPECTION PERCENTAGE



Total individual ship visited: 26,259

Figure 2: INSPECTION PER SHIP RISK PROFILE

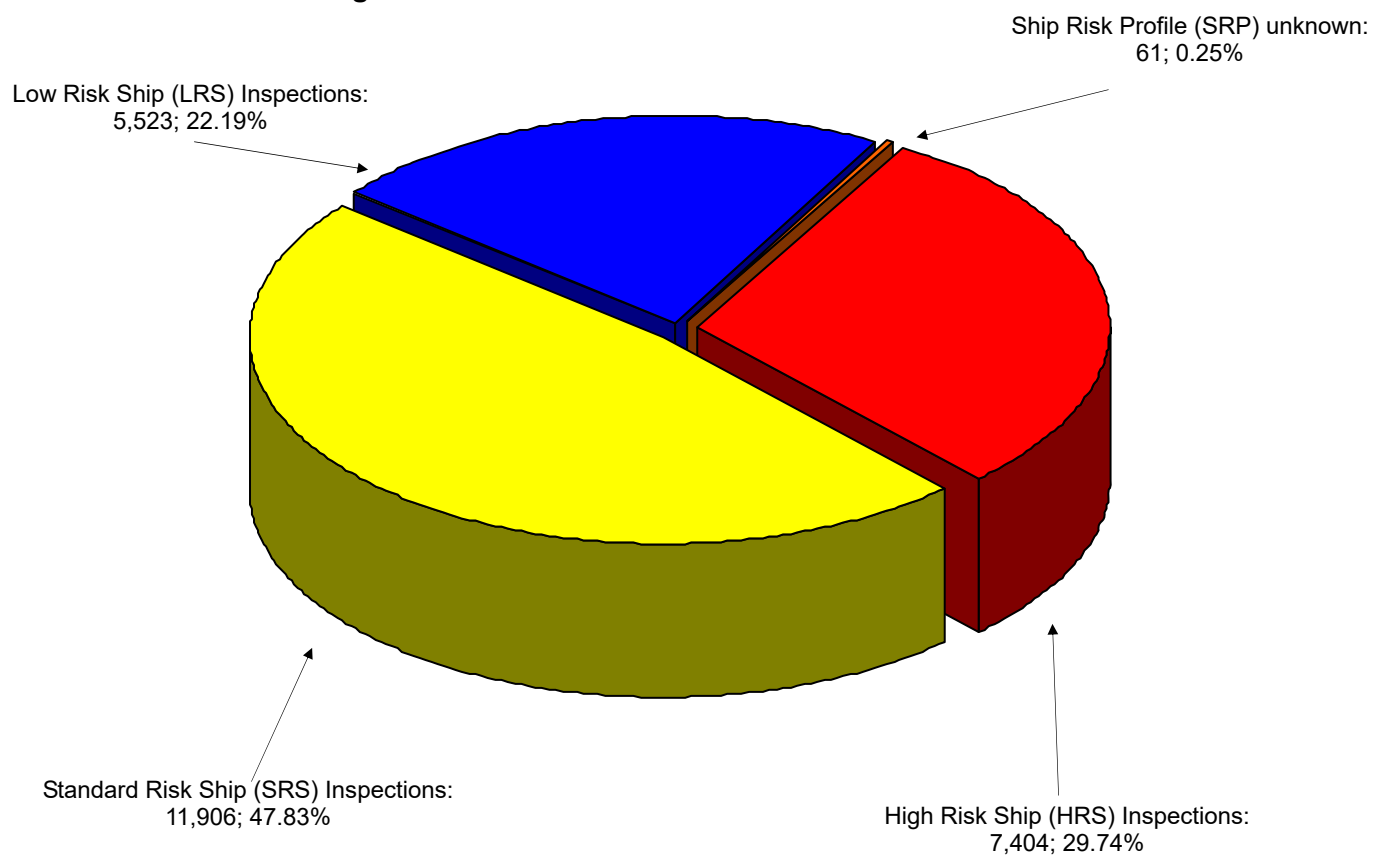
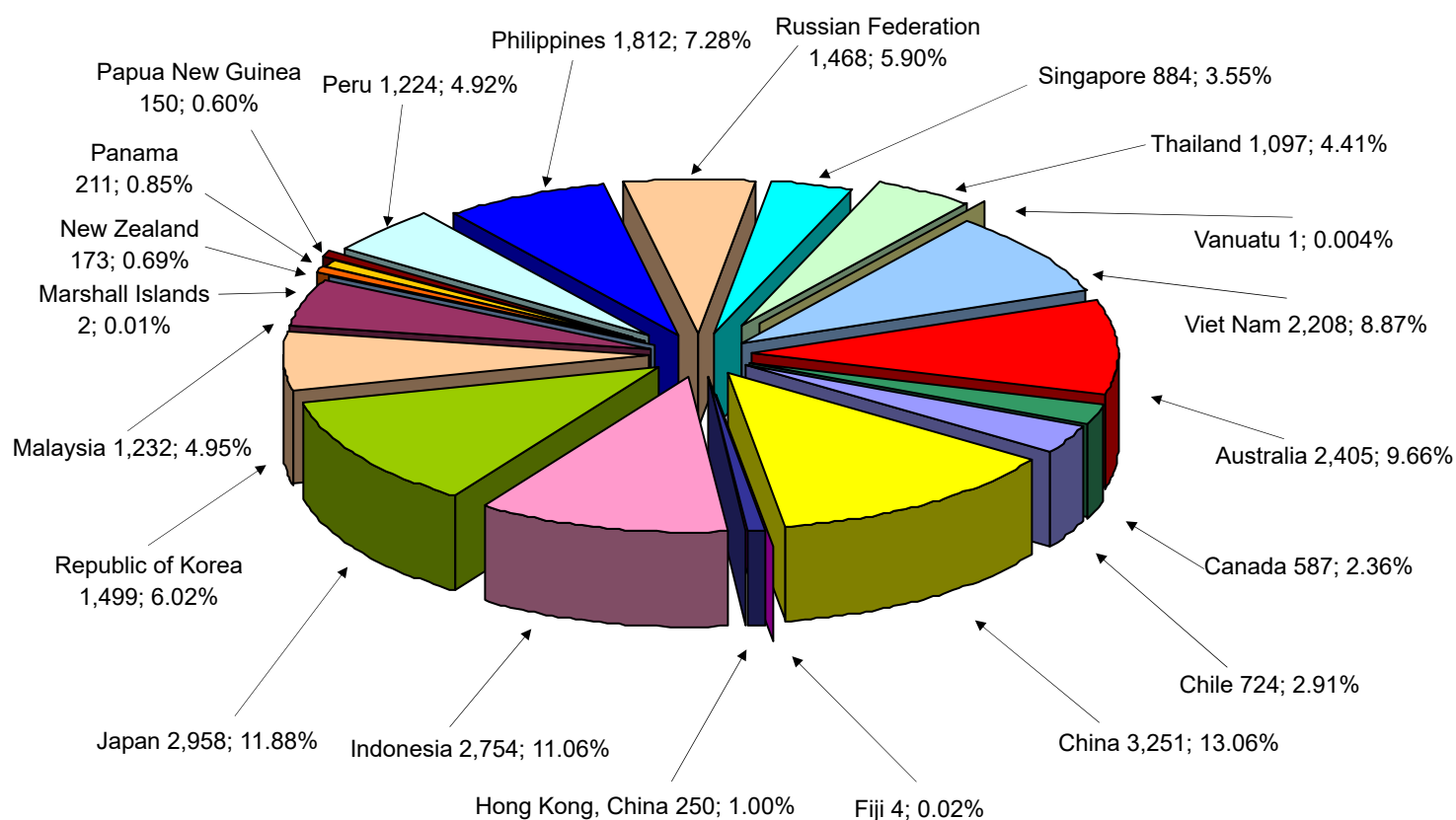


Figure 3: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES



Total inspections: 24,894

Figure 4: TYPE OF SHIP INSPECTED

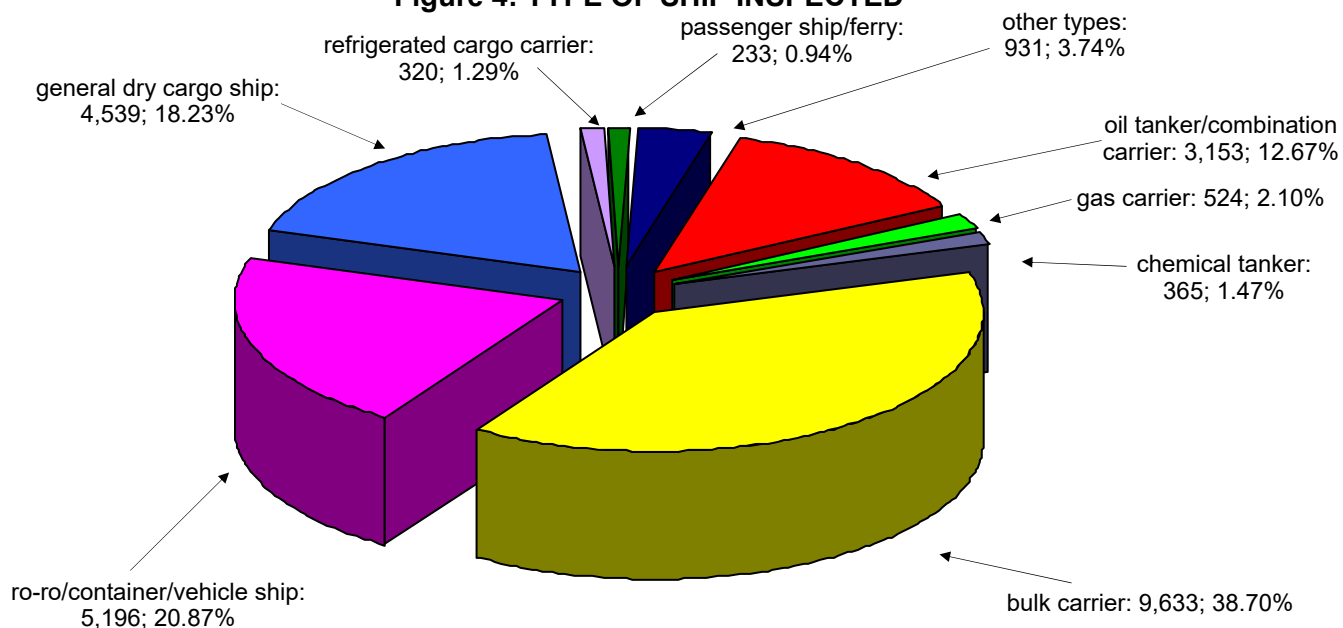
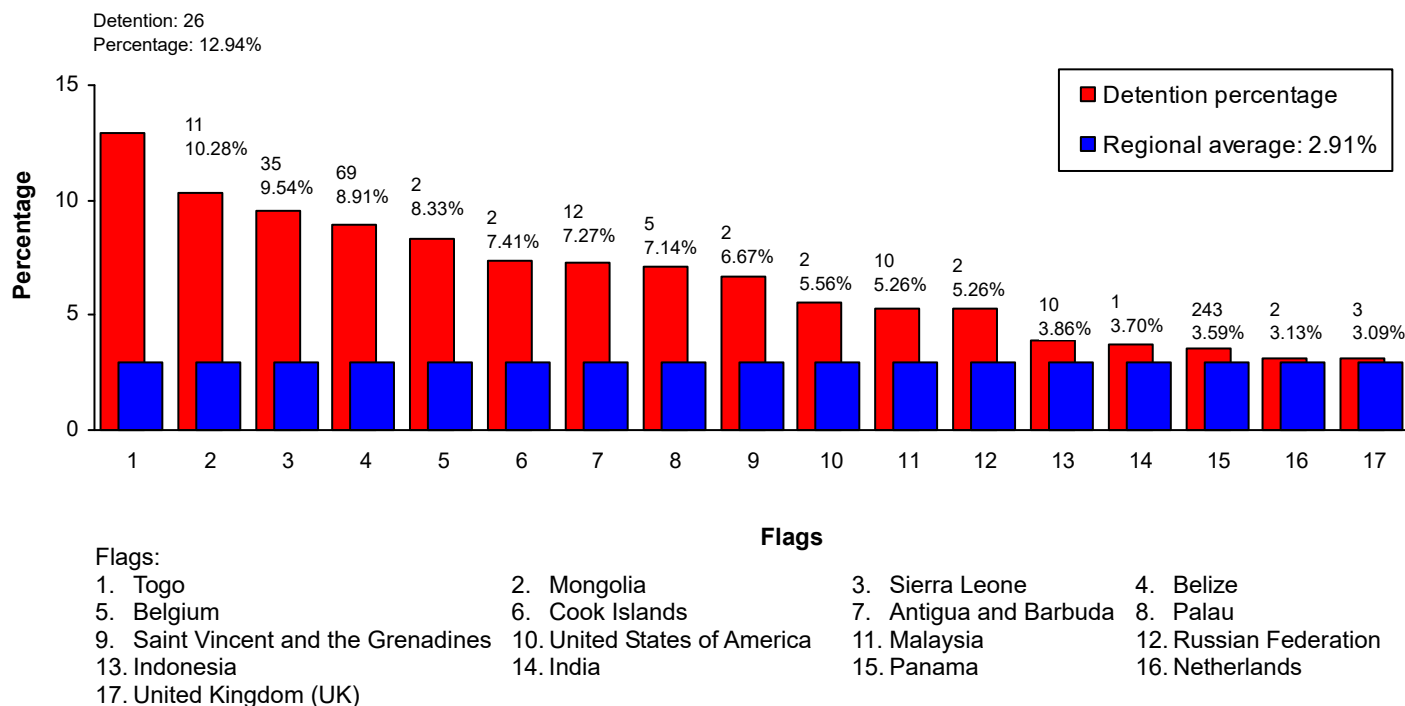


Figure 5: DETENTIONS PER FLAG

Note: Flags listed above are those flags the ships of which were involved in at least 20 port State inspections and detention percentage of which are above the regional average detention percentage. The complete information on detentions by flag is given in Table 4.

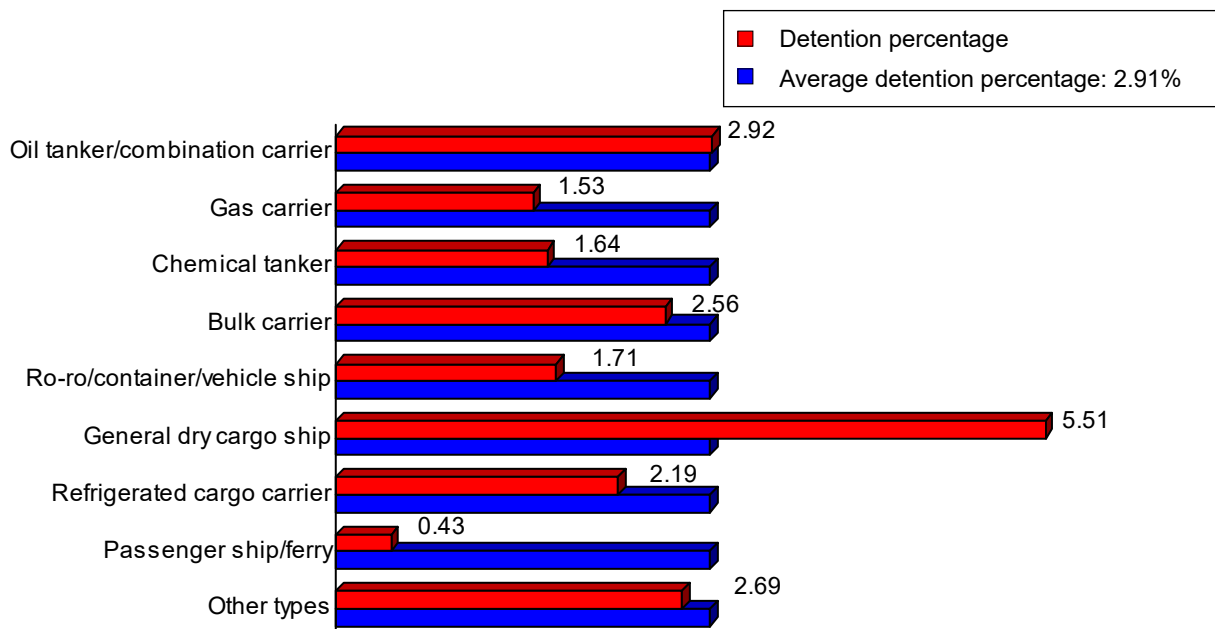
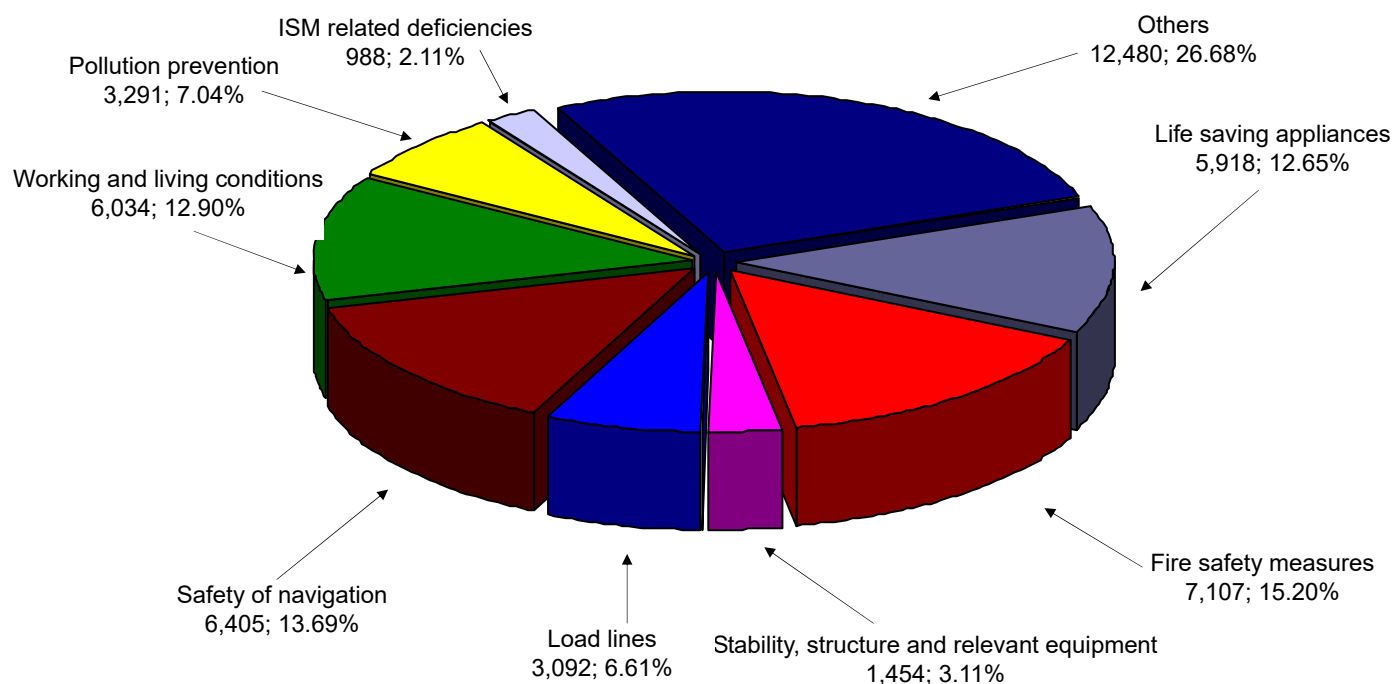
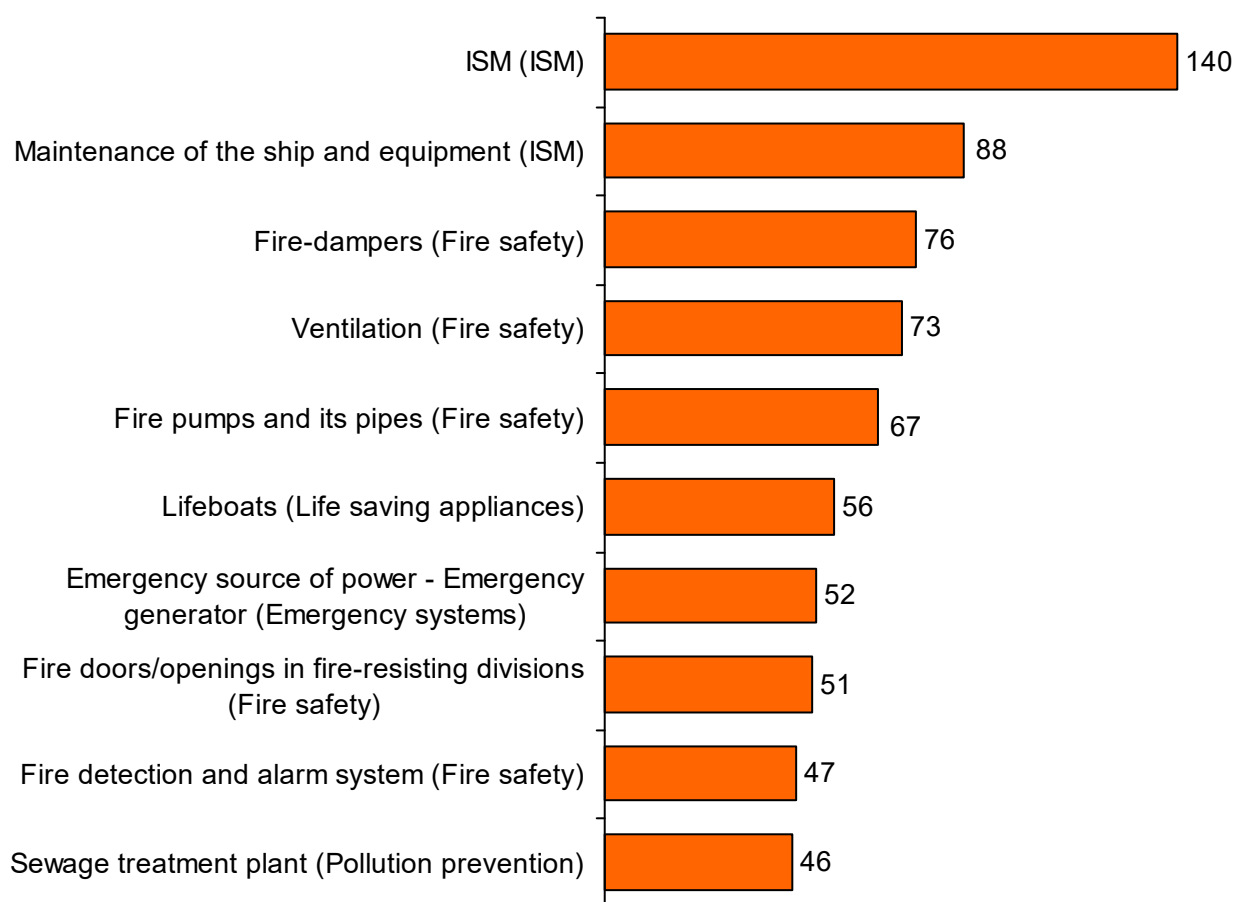
Figure 6: DETENTION PER SHIP TYPE

Figure 7: DEFICIENCIES BY MAIN CATEGORIES**Figure 8: MOST FREQUENT DETAINABLE DEFICIENCIES**

OVERVIEW OF PORT STATE CONTROL RESULTS 2012 - 2022

Figure 9: NO. OF INSPECTIONS

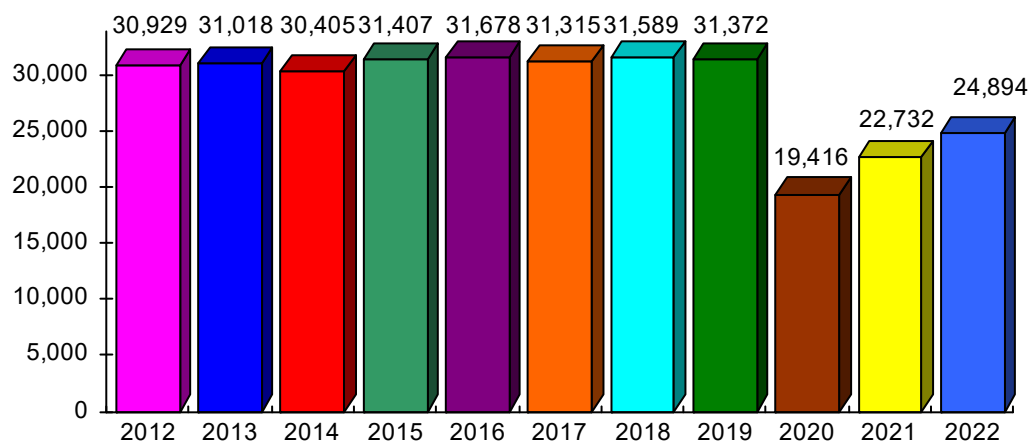


Figure 10: INSPECTION PERCENTAGE

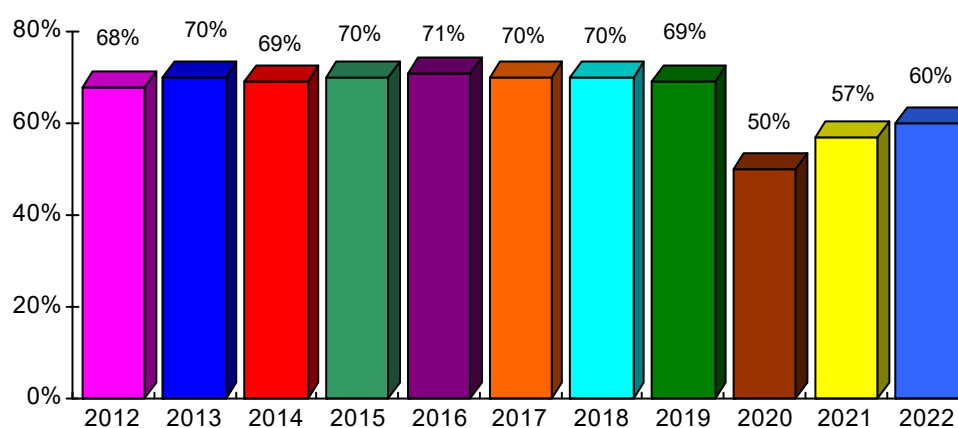


Figure 11: NO. OF INSPECTIONS WITH DEFICIENCIES

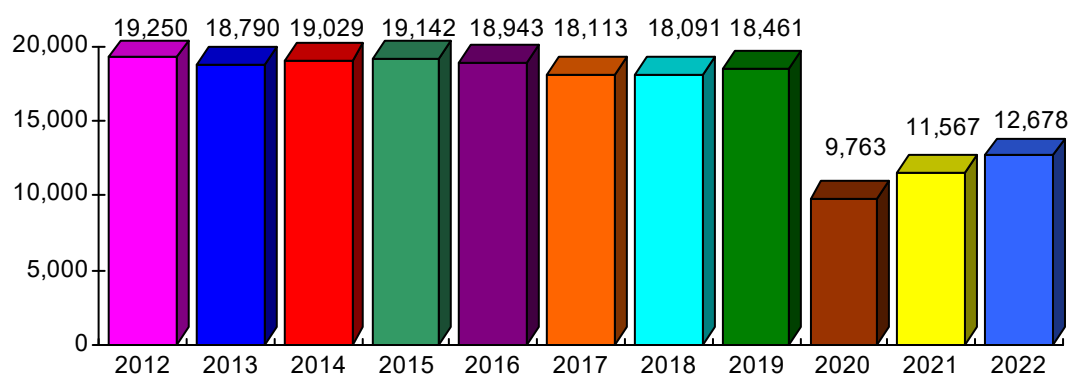
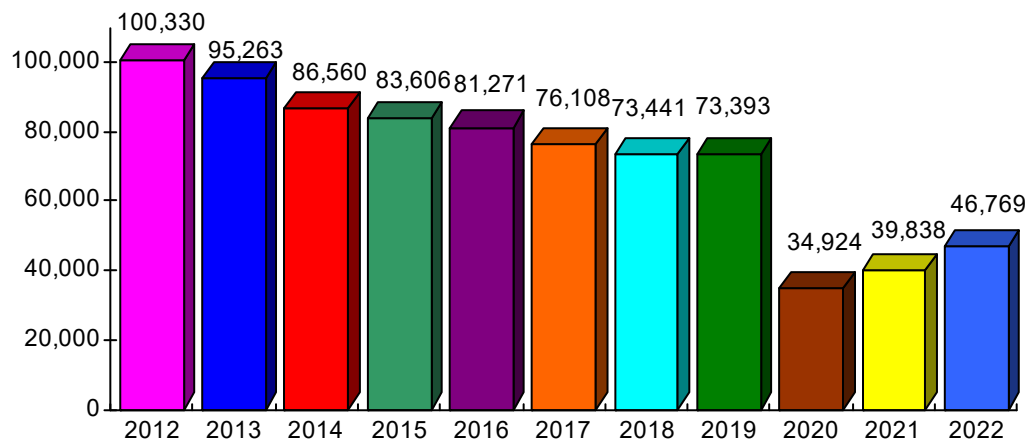
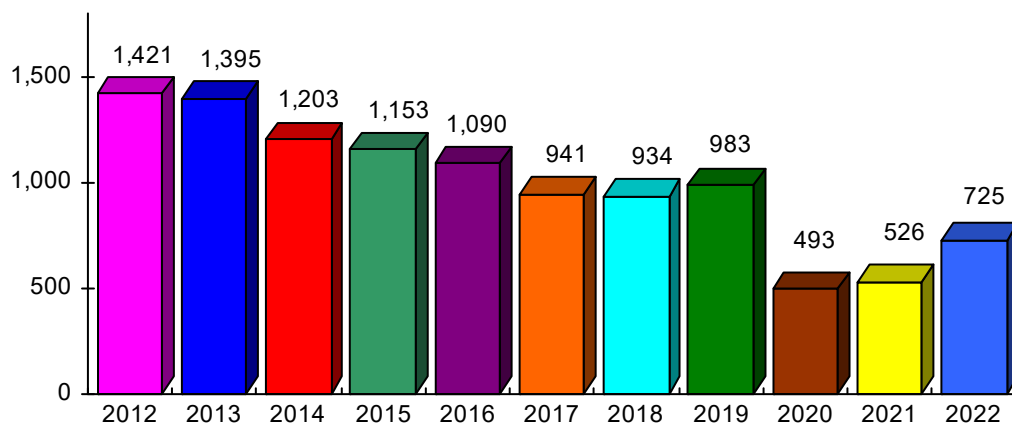
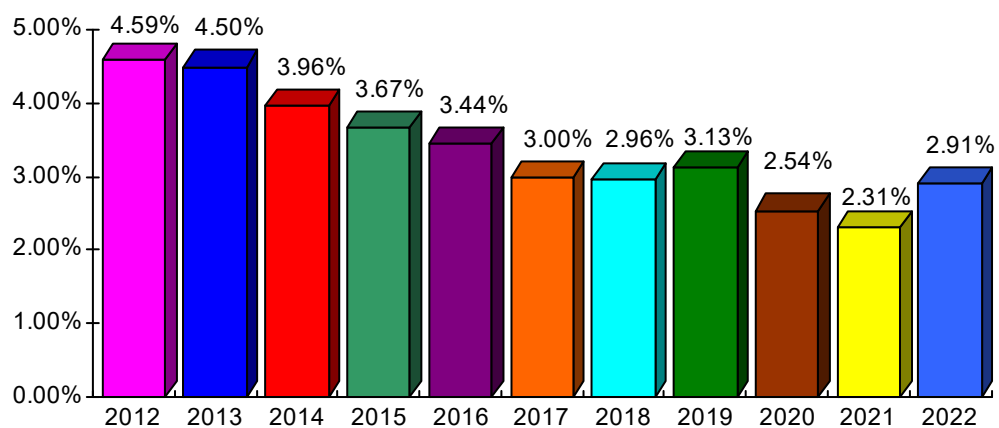


Figure 12: NO. OF DEFICIENCIES**Figure 13: NO. OF DETENTIONS****Figure 14: DETENTION PERCENTAGE**

ANNEX 1

STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(As of 31 December 2022)

Authority	LOAD LINES 66	LOAD LINES PROT 88	SOLAS 74	SOLAS PROT 78	SOLAS PROT 88	MARPOL 73/78	STCW 78
Australia	29/07/68	07/02/97	17/08/83	17/08/83	07/02/97	14/10/87	07/11/83
Canada	14/01/70	08/04/10	08/05/78	-	08/04/10	16/11/92	06/11/87
Chile	10/03/75	03/03/95	28/03/80	15/07/92	29/09/95	10/10/94	09/06/87
China	05/10/73	03/02/95	07/01/80	17/12/82	03/02/95	01/07/83	08/06/81
Fiji	29/11/72	28/07/04	04/03/83	28/07/04	28/07/04	08/03/16	27/03/91
Hong Kong, China*	16/08/72	23/10/02	25/05/80	25/11/81	23/10/02	11/04/85	03/11/84
Indonesia	17/01/77	28/11/17	17/02/81	23/08/88	28/11/17	21/10/86	27/01/87
Japan	15/05/68	24/06/97	15/05/80	15/05/80	24/06/97	09/06/83	27/05/82
Republic of Korea	10/07/69	14/11/94	31/12/80	02/12/82	14/11/94	23/07/84	04/04/85
Malaysia	12/01/71	11/11/11	19/10/83	19/10/83	11/11/11	31/01/97	31/01/92
Marshall Islands	26/04/88	29/11/94	26/04/88	26/04/88	16/10/95	26/04/88	25/04/89
New Zealand	05/02/70	03/06/01	23/02/90	23/02/90	03/06/01	25/09/98	30/07/86
Panama	13/05/66	17/09/07	09/03/78	14/07/82	17/09/07	20/02/85	29/06/92
Papua New Guinea	18/05/76	-	12/11/80	-	-	25/10/93	28/10/91
Peru	18/01/67	24/06/09	04/12/79	16/07/82	21/08/09	25/04/80	16/07/82
Philippines	04/03/69	24/04/18	15/12/81	24/04/18	06/06/18	15/06/01	22/02/84
Russian Federation	04/07/66	18/08/00	09/01/80	12/05/81	18/08/00	03/11/83	09/10/79
Singapore	21/09/71	18/08/99	16/03/81	01/06/84	10/08/99	01/11/90	01/05/88
Thailand	30/12/92	-	18/12/84	-	-	02/11/07	19/06/97
Vanuatu	28/07/82	26/11/90	28/07/82	28/07/82	14/09/92	13/04/89	22/04/91
Viet Nam	18/12/90	27/05/02	18/12/90	12/10/92	27/05/02	29/05/91	18/12/90
Mexico	25/03/70	13/05/94	28/03/77	30/06/83	13/05/94	23/04/92	02/02/82
Cambodia	28/11/94	08/06/01	28/11/94	28/11/94	08/06/01	28/11/94	08/06/01
DPR Korea	18/10/89	08/08/01	01/05/85	01/05/85	08/08/01	01/05/85	01/05/85
Macao, China*	18/07/05	11/10/10	20/12/99	20/12/99	24/06/05	20/12/99	18/07/05
Samoa	23/10/79	18/05/04	14/03/97	14/03/97	18/05/04	07/02/02	24/05/93
Solomon Islands	30/06/04	-	30/06/04	-	-	30/06/04	01/06/94
Tonga	12/04/77	15/06/00	12/04/77	18/09/03	15/06/00	01/02/96	07/02/95
Entry into force date	21/07/68	03/02/00	25/05/80	01/05/81	03/02/00	02/10/83	28/04/84

* Effective date of extension of instruments.

(As of 31 December 2022)

Authority	COLREG 72	TONNAGE 69	ILO 147**	MLC 2006***	AFS 2001	CLC PROT 92	BWM 2004
Australia	29/02/80	21/05/82	-	21/12/11	09/01/07	09/10/95	07/06/17
Canada	07/03/75	18/07/94	D	15/06/10	08/04/10	29/05/98	08/04/10
Chile	02/08/77	22/11/82	-	22/02/18	06/10/16	29/05/02	-
China	07/01/80	08/04/80	-	12/11/15	07/03/11	05/01/99	22/10/18
Fiji	04/03/83	29/11/72	-	21/01/13	08/03/16	30/11/99	08/03/16
Hong Kong, China*	15/07/77	18/07/82	-	06/08/18	15/02/16	05/01/99	13/08/20
Indonesia	13/11/79	14/03/89	-	12/06/17	11/09/14	06/07/99	24/11/15
Japan	21/06/77	17/07/80	D	05/08/13	08/07/03	24/08/94	10/10/14
Republic of Korea	29/07/77	18/01/80	-	09/01/14	24/07/08	07/03/97	10/12/09
Malaysia	23/12/80	24/04/84	-	20/08/13	27/09/10	09/06/04	27/09/10
Marshall Islands	26/04/88	25/04/89	-	25/09/07	09/05/08	16/10/95	26/11/09
New Zealand	26/11/76	06/01/78	-	09/03/16	-	25/06/98	09/01/17
Panama	14/03/79	09/03/78	-	06/02/09	17/09/07	18/03/99	19/10/16
Papua New Guinea	18/05/76	25/10/93	-	-	-	23/01/01	-
Peru	09/01/80	16/07/82	06/07/04	-	02/07/19	01/09/05	10/06/16
Philippines	10/06/13	06/09/78	-	20/08/12	06/06/18	07/07/97	06/06/18
Russian Federation	09/11/73	20/11/69	D	20/08/12	19/10/12	20/03/00	24/05/12
Singapore	29/04/77	06/06/85	-	15/06/11	31/12/09	18/09/97	08/06/17
Thailand	06/08/79	11/06/96	-	07/06/16	-	17/07/17	-
Vanuatu	28/07/82	13/01/89	-	-	20/08/08	18/02/99	-
Viet Nam	18/12/90	18/12/90	-	08/05/13	27/11/15	17/06/03	-
Mexico	08/04/76	14/07/72	-	-	07/07/06	13/05/94	18/03/08
Cambodia	28/11/94	28/11/94	-	-	-	08/06/01	-
DPR Korea	01/05/85	18/10/89	-	-	21/08/20	13/07/21	-
Macao, China*	20/12/99	18/07/05	-	-	07/03/11	24/06/05	22/10/18
Samoa	23/10/79	18/05/04	-	21/11/13	-	01/02/02	-
Solomon Islands	12/03/82	30/06/04	-	-	-	30/06/04	-
Tonga	12/04/97	12/04/97	-	-	16/04/14	10/12/99	16/04/14
Entry into force date	15/07/77	18/07/82	28/11/81	20/08/13	17/09/08	30/05/96	08/09/17

* Effective date of extension of instruments.

** Although some Authorities have not ratified the ILO Convention No.147, parts of the ILO conventions referred to therein are implemented under their national legislation and port State control is carried out on matters covered by the national regulations.

*** MLC 2006 will supersede ILO147 if the Authority ratified both of them.

Table 1a: STATUS OF MARPOL 73/78

(Date of deposit of instruments)

(As of 31 December 2022)

Authority	Annexes I & II	Annex III	Annex IV	Annex V	Annex VI
Australia	14/10/87	10/10/94	27/02/04	14/08/90	07/08/07
Canada	16/11/92	08/08/02	26/03/10	26/03/10	26/03/10
Chile	10/10/94	10/10/94	10/10/94	15/08/08	16/10/06
China	01/07/83	13/09/94	02/11/06	21/11/88	23/05/06
Fiji	08/03/16	-	08/03/16	08/03/16	-
Hong Kong, China*	11/04/85	07/03/95	02/11/06	27/03/96	20/03/08
Indonesia	21/10/86	24/08/12	24/08/12	24/08/12	24/08/12
Japan	09/06/83	09/06/83	09/06/83	09/06/83	15/02/05
Republic of Korea	23/07/84	28/02/96	28/11/03	28/02/96	20/04/06
Malaysia	31/01/97	27/09/10	27/09/10	31/01/97	27/09/10
Marshall Islands	26/04/88	26/04/88	26/04/88	26/04/88	07/03/02
New Zealand	25/09/98	25/09/98	-	25/09/98	26/05/22
Panama	20/02/85	20/02/85	20/02/85	20/02/85	13/05/03
Papua New Guinea	25/10/93	25/10/93	25/10/93	25/10/93	-
Peru	25/04/80	25/04/80	25/04/80	25/04/80	04/12/14
Philippines	15/06/01	15/06/01	15/06/01	15/06/01	24/04/18
Russian Federation	03/11/83	14/08/87	14/08/87	14/08/87	08/04/11
Singapore	01/11/90	02/03/94	01/05/05	27/05/99	08/10/00
Thailand	02/11/07	-	-	-	-
Vanuatu	13/04/89	22/04/91	15/03/04	22/04/91	15/03/04
Viet Nam	29/05/91	19/12/14	19/12/14	19/12/14	19/12/14
Mexico	23/04/92	15/07/22	15/07/22	15/07/98	-
Cambodia	28/11/94	28/11/94	28/11/94	28/11/94	-
DPR Korea	01/05/01	01/05/01	01/05/01	01/05/01	-
Macao, China*	20/12/99	20/12/99	02/11/06	20/12/99	23/05/06
Samoa	07/02/02	07/02/02	07/02/02	07/02/02	18/05/04
Solomon Islands	30/06/04	30/06/04	30/06/04	30/06/04	-
Tonga	01/02/96	01/02/96	01/02/96	01/02/96	20/03/15
Entry into force date	02/10/1983	01/07/1992	27/09/2003	31/12/1988	19/05/2005

* Effective date of extension of instruments.

ANNEX 2

PORT STATE INSPECTION STATISTICS

STATISTICS FOR 2022

Table 2: PORT STATE INSPECTIONS CARRIED OUT BY AUTHORITIES

Authority	No. of individual ships inspected (a)	No. of initial and follow-up inspections (b+c)	No. of initial inspections (b)	No. of follow-up inspections (c)	No. of inspections with deficiencies (d)	No. of deficiencies ¹⁾ (e)	No. of detentions ¹⁾ (f)	No. of individual ships visited ²⁾ (g)	Inspection rate (a/g%)	Detention percentage (f/b%)
Australia ³⁾	2,167	3,621	2,405	1,216	1,419	6,213	144	6,065	35.73	5.99
Canada ⁴⁾	579	587	587	0	423	2,463	22	2,012	28.78	3.75
Chile	686	1,466	724	742	483	1,495	7	1,948	35.22	0.97
China	2,915	4,501	3,251	1,250	2,522	8,048	179	15,037	19.39	5.51
Fiji	3	9	4	5	3	6	0	216	1.39	0
Hong Kong, China	240	373	250	123	155	603	6	3,974	6.04	2.40
Indonesia	2,148	2,945	2,754	191	850	2,583	57	7,977	26.93	2.07
Japan	2,409	3,506	2,958	548	1,538	6,262	69	7,254	33.21	2.33
Republic of Korea	1,342	2,050	1,499	551	1,061	3,901	53	11,191	11.99	3.54
Malaysia	1,055	1,431	1,232	199	530	1,864	9	7,283	14.49	0.73
Marshall Islands	2	2	2	0	0	0	0	61	3.28	0
New Zealand	157	272	173	99	109	445	7	1,015	15.47	4.05
Panama ⁴⁾	185	226	211	15	55	137	2	4,060	4.56	0.95
Papua New Guinea	117	204	150	54	83	364	2	504	23.21	1.33
Peru	1,096	1,269	1,224	45	31	63	1	1,871	58.58	0.08
Philippines	1,517	2,144	1,812	332	501	1,188	2	3,799	39.93	0.11
Russian Federation ⁴⁾	907	2,935	1,468	1,467	1,249	6,292	106	1,519	59.71	7.22
Singapore	852	1,101	884	217	479	2,114	46	14,819	5.75	5.20
Thailand	922	1,167	1,097	70	305	670	11	3,853	23.93	1.00
Vanuatu	1	1	1	0	0	0	0	35	2.86	0
Viet Nam	1,877	2,432	2,208	224	882	2,058	2	4,811	39.01	0.09
Total	15,853	32,242	24,894	7,348	12,678	46,769	725	Regional 26,259	Regional 60%	Regional 2.91%

1) Numbers of deficiencies and detentions do not include those related to security.

2) LLI data for 2022.

3) Data for Australia is also provided to Indian Ocean MOU.

4) Data is only for the Pacific ports.

Table 2a: PORT STATE INSPECTIONS ON MARITIME SECURITY

Authority	No. of inspections	No. of inspections with security related deficiencies	No. of security related deficiencies	No. of security related detentions	Detention percentage (%)
Australia	2,405	3	3	0	0
Canada	587	16	16	0	0
Chile	724	24	29	0	0
China	3,251	46	46	1	0.03
Fiji	4	0	0	0	0
Hong Kong, China	250	21	21	0	0
Indonesia	2,754	25	30	2	0.07
Japan	2,958	94	100	0	0
Republic of Korea	1,499	186	190	0	0
Malaysia	1,232	46	47	1	0.08
Marshall Islands	2	0	0	0	0
New Zealand	173	5	6	0	0
Panama	211	0	0	0	0
Papua New Guinea	150	1	2	0	0
Peru	1,224	1	1	0	0
Philippines	1,812	54	73	0	0
Russian Federation	1,468	125	130	4	0.27
Singapore	884	17	17	0	0
Thailand	1,097	61	66	0	0
Vanuatu	1	0	0	0	0
Viet Nam	2,208	25	25	0	0
Total	24,894	750	802	8	Regional 0.03%

Note: Security related data showing in the above table and the tables of deficiency by category are excluded from all other statistical tables and figures in this report.

Table 2b: PORT STATE INSPECTIONS BY CATEGORIES (PHYSICAL & REMOTE)

Authority	Initial inspections					Follow-up inspections				
	Physical		Remote		Total	Physical		Remote		Total
	#	%	#	%		#	%	#	%	
Australia	2,405	100.00	0	0	2,405	1,058	87.01	158	12.99	1,216
Canada	587	100.00	0	0	587	0	0	0	0	0
Chile	724	100.00	0	0	724	647	87.20	95	12.80	742
China	1,027	31.59	2,224	68.41	3,251	322	25.76	928	74.24	1,250
Fiji	4	100.00	0	0	4	5	100.00	0	0	5
Hong Kong, China	249	99.60	1	0.40	250	55	44.72	68	55.28	123
Indonesia	2,754	100.00	0	0	2,754	190	99.48	1	0.52	191
Japan	2,851	96.38	107	3.62	2,958	511	93.25	37	6.75	548
Republic of Korea	1,498	99.93	1	0.07	1,499	388	70.42	163	29.58	551
Malaysia	1,232	100.00	0	0	1,232	197	98.99	2	1.01	199
Marshall Islands	1	50.00	1	50.00	2	0	0	0	0	0
New Zealand	173	100.00	0	0	173	87	87.88	12	12.12	99
Panama	211	100.00	0	0	211	9	60.00	6	40.00	15
Papua New Guinea	150	100.00	0	0	150	54	100.00	0	0	54
Peru	1,223	99.92	1	0.08	1,224	25	55.56	20	44.44	45
Philippines	1,812	100.00	0	0	1,812	332	100.00	0	0	332
Russian Federation	1,468	100.00	0	0	1,468	1,323	90.18	144	9.82	1,467
Singapore	774	87.56	110	12.44	884	83	38.25	134	61.75	217
Thailand	1,097	100.00	0	0	1,097	70	100.00	0	0	70
Vanuatu	1	100.00	0	0	1	0	0	0	0	0
Viet Nam	2,138	96.83	70	3.17	2,208	224	100.00	0	0	224
Total	22,379	89.90	2,515	10.10	24,894	5,580	75.94	1,768	24.06	7,348

Table 3: PORT STATE INSPECTIONS PER SHIP RISK PROFILE

Authority	Ship Risk Profile (SRP)				Total No. of inspections
	HRS	SRS	LRS	SRP Unknown	
Australia	417	1,238	745	5	2,405
Canada	132	294	161	0	587
Chile	138	409	177	0	724
China	1,060	1,522	650	19	3,251
Fiji	2	2	0	0	4
Hong Kong, China	71	120	57	2	250
Indonesia	776	1,217	761	0	2,754
Japan	771	1,549	626	12	2,958
Republic of Korea	529	693	277	0	1,499
Malaysia	401	576	249	6	1,232
Marshall Islands	0	2	0	0	2
New Zealand	44	94	35	0	173
Panama	33	107	71	0	211
Papua New Guinea	46	78	26	0	150
Peru	218	676	328	2	1,224
Philippines	547	885	380	0	1,812
Russian Federation	910	412	135	11	1,468
Singapore	272	491	119	2	884
Thailand	250	548	299	0	1,097
Vanuatu	0	1	0	0	1
Viet Nam	787	992	427	2	2,208
Total	7,404	11,906	5,523	61	24,894

Table 4: PORT STATE INSPECTIONS PER FLAG

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Algeria	2	0	0	0	0
Antigua and Barbuda	165	80	304	12	7.27
Australia	2	1	6	1	50.00
Bahamas	555	209	631	9	1.62
Bahrain	1	0	0	0	0
Bangladesh	76	49	136	2	2.63
Barbados	31	9	19	0	0
Belgium	24	13	44	2	8.33
Belize	774	728	3,635	69	8.91
Bermuda (UK)	29	4	7	0	0
Bolivia	3	3	13	1	33.33
Brazil	4	2	5	0	0
Brunei Darussalam	3	1	4	0	0
Cambodia	1	1	3	0	0
Cameroon	15	13	79	2	13.33
Cayman Islands (UK)	51	17	40	0	0
Chile	10	0	0	0	0
China	817	336	1,129	3	0.37
Comoros	4	4	18	1	25.00
Cook Islands	27	24	118	2	7.41
Croatia	7	4	12	0	0
Curacao	9	3	11	0	0
Cyprus	357	152	533	7	1.96
Denmark	165	70	201	1	0.61
Djibouti	6	6	45	1	16.67
Dominica	10	10	65	3	30.00
Ecuador	5	2	9	0	0
Egypt	3	0	0	0	0
Ethiopia	9	5	20	1	11.11
Falkland Islands (UK) (Malvinas)	1	1	2	0	0
Faroe Islands (Denmark)	2	0	0	0	0
Finland	1	0	0	0	0
France	29	9	31	0	0
Gabon	15	13	73	2	13.33
Germany	43	12	21	0	0
Ghana	1	1	12	1	100.00
Gibraltar (UK)	12	5	15	2	16.67
Greece	159	45	114	1	0.63

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Guinea-Bissau	5	5	38	1	20.00
Guyana	7	7	89	4	57.14
Hong Kong, China	2,290	904	2,918	31	1.35
India	27	14	83	1	3.70
Indonesia	259	190	761	10	3.86
Iran	17	7	21	0	0
Ireland	1	0	0	0	0
Isle of Man (UK)	105	33	81	1	0.95
Italy	40	20	76	0	0
Jamaica	22	22	95	0	0
Japan	186	73	208	1	0.54
Jordan	1	1	8	0	0
Kiribati	18	16	59	1	5.56
Korea, Republic of	742	412	1,400	10	1.35
Kuwait	7	3	9	0	0
Liberia	2,929	1,271	4,478	73	2.49
Libya	1	0	0	0	0
Lithuania	1	1	9	1	100.00
Luxembourg	14	5	12	0	0
Malaysia	190	109	504	10	5.26
Maldives	1	1	2	0	0
Malta	682	285	896	8	1.17
Marshall Islands	2,497	972	3,194	49	1.96
Moldova	1	0	0	0	0
Mongolia	107	101	584	11	10.28
Montenegro	6	4	47	2	33.33
Myanmar	7	6	16	0	0
Nauru	4	4	20	1	25.00
Netherlands	64	31	87	2	3.13
New Zealand	2	0	0	0	0
Niue	9	8	24	0	0
Norway	193	96	288	2	1.04
Pakistan	6	2	5	0	0
Palau	70	66	385	5	7.14
Panama	6,764	3,819	13,915	243	3.59
Papua New Guinea	1	1	3	0	0
Peru	1	1	1	0	0
Philippines	136	50	225	2	1.47
Portugal	247	102	276	5	2.02
Qatar	8	3	5	0	0
Russian Federation	38	28	119	2	5.26

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Saint Kitts and Nevis	4	3	10	0	0
Saint Vincent and the Grenadines	30	24	114	2	6.67
Saudi Arabia	26	9	26	0	0
Sierra Leone	367	358	2,131	35	9.54
Singapore	1,753	616	2,017	30	1.71
Spain	10	2	7	0	0
Sri Lanka	3	2	2	0	0
Sweden	12	5	8	0	0
Switzerland	5	2	2	0	0
Taiwan, China	84	16	92	2	2.38
Tanzania	14	12	121	6	42.86
Thailand	195	127	339	2	1.03
Togo	201	190	1,244	26	12.94
Türkiye	23	7	19	0	0
Tuvalu	93	67	177	2	2.15
Ukraine	5	5	19	1	20.00
United Kingdom (UK)	97	42	147	3	3.09
United States of America	36	17	53	2	5.56
Vanuatu	22	11	23	0	0
Viet Nam	780	658	1,922	15	1.92
Total	24,894	12,678	46,769	725	Regional 2.91

Table 5: PORT STATE INSPECTIONS PER SHIP TYPE

Type of ship	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
NLS tanker	39	20	91	2	5.13
Combination carrier	10	6	17	0	0
Oil tanker	3,104	1,107	3,930	90	2.90
Gas carrier	524	180	443	8	1.53
Chemical tanker	365	190	613	6	1.64
Bulk carrier	9,633	4,765	17,154	247	2.56
Vehicle carrier	661	259	654	6	0.91
Container ship	4,451	1,947	6,256	76	1.71
Ro-Ro cargo ship	84	66	342	7	8.33
General cargo/multi-purpose ship	4,539	3,252	13,830	250	5.51
Refrigerated cargo carrier	320	190	639	7	2.19
Woodchip carrier	249	114	350	5	2.01
Livestock carrier	43	28	134	0	0
Ro-Ro passenger ship	58	54	207	1	1.72
Passenger ship	175	93	307	0	0
Factory ship	2	2	9	1	50.00
Heavy load carrier	47	24	72	1	2.13
Offshore service vessel	101	32	125	1	0.99
MODU & FPSO	4	2	7	0	0
High speed passenger craft	26	18	66	0	0
Special purpose ship	46	28	137	3	6.52
Tugboat	199	136	536	6	3.02
Others	214	165	850	8	3.74
Total	24,894	12,678	46,769	725	2.91

Table 6: PORT STATE INSPECTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Aegean Register of Shipping	1	0	0	0	0	0
Alpha Ship Classification	34	0	0	0	0	0
American Bureau of Shipping	3,166	67	3	2.12	0.09	4.48
Asia Classification Society	9	0	0	0	0	0
Asia Shipping Certification Services	59	11	4	18.64	6.78	36.36
Azure Naval Architects BV	1	0	0	0	0	0
Biro Klasifikasi Indonesia	210	8	1	3.81	0.48	12.50
Bolivian Register of Shipping	3	0	0	0	0	0
Bulgarski Koraben Registar	1	0	0	0	0	0
Bureau Veritas	3,383	104	3	3.07	0.09	2.88
China Classification Society	2,466	36	1	1.46	0.04	2.78
Columbus American Register	4	0	0	0	0	0
Cosmos Marine Bureau	150	17	1	11.33	0.67	5.88
CR Classification Society	149	3	1	2.01	0.67	33.33
Croatian Register of Shipping	26	0	0	0	0	0
Cyprus Bureau of Shipping	5	1	0	20.00	0	0
DNV AS	6,166	125	3	2.03	0.05	2.40
Dromon Bureau of Shipping	87	7	0	8.05	0	0
Foresight Ship Classification	58	7	3	12.07	5.17	42.86
Global Marine Bureau	1	0	0	0	0	0
Hellas Naval Bureau of Shipping S.M.P.C	4	1	0	25.00	0	0
Hellenic Register of Shipping	3	0	0	0	0	0
Horizon International of Naval Surveying and Inspection Bureau, S.A.	1	0	0	0	0	0
Indian Register of Shipping	83	4	0	4.82	0	0
Intermaritime Certification Services, S.A.	887	61	4	6.88	0.45	6.56
International Marine Survey Association	3	1	0	33.33	0	0
International Maritime Register	15	0	0	0	0	0
International Naval Surveys Bureau	15	3	0	20.00	0	0
International Register of Shipping	110	9	0	8.18	0	0
International Ship Classification	42	3	0	7.14	0	0
Iranian Classification Society	27	0	0	0	0	0
Isthmus Bureau of Shipping	433	31	2	7.16	0.46	6.45
Isthmus Maritime Classification Society S.A.	5	2	0	40.00	0	0
Korea Classification Society (former Joson Classification Society)	20	1	0	5.00	0	0
Korea Maritime Transportation Safety Authority	3	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Korea Ship Safety Technology Authority	3	0	0	0	0	0
KOREAN REGISTER	2,254	51	6	2.26	0.27	11.76
Limdal Marine Services	2	0	0	0	0	0
Lloyd's Register	3,655	68	3	1.86	0.08	4.41
Macosnar Corporation	27	2	0	7.41	0	0
Maritime Bureau of Shipping	6	0	0	0	0	0
Maritime Technical Systems and Services	12	0	0	0	0	0
National Shipping Adjusters Inc	11	2	0	18.18	0	0
Nautx, Ltd	2	0	0	0	0	0
New United International Marine Services Ltd	43	5	0	11.63	0	0
Nippon Kaiji Kyokai	8,755	182	17	2.08	0.19	9.34
Novel Classification Society S.A.	7	2	0	28.57	0	0
Overseas Marine Certification Services	597	42	8	7.04	1.34	19.05
Panama Maritime Documentation Services	528	35	4	6.63	0.76	11.43
Panama Shipping Registrar Inc.	35	3	0	8.57	0	0
Phoenix Register of Shipping	7	0	0	0	0	0
Polski Rejestr Statkow	60	6	1	10.00	1.67	16.67
Qualitas Register of Shipping S.A.	16	0	0	0	0	0
RINA Services S.p.A.	1,287	54	3	4.20	0.23	5.56
RINAVE Portuguesa	3	0	0	0	0	0
Royal Bureau of Shipping	2	1	0	50.00	0	0
Russian Maritime Register of Shipping	127	6	0	4.72	0	0
Russian River Register	1	0	0	0	0	0
Ship Classification Malaysia	18	1	1	5.56	5.56	100.00
Shipping Register of Ukraine	5	1	0	20.00	0	0
SingClass International Pte Ltd	2	0	0	0	0	0
Sing-Lloyd	18	1	1	5.56	5.56	100.00
Union Bureau of Shipping	186	23	4	12.37	2.15	17.39
United Maritime Survey	1	0	0	0	0	0
Universal Maritime Bureau	175	18	5	10.29	2.86	27.78
Vega Register Inc.	6	1	0	16.67	0	0
Veritas Register of Shipping	4	0	0	0	0	0
Vietnam Register	810	15	2	1.85	0.25	13.33
Other	84	15	3	17.86	3.57	20.00

Note: The number of overall inspections and overall detentions is calculated corresponding to each recognized organization (RO) that issued statutory certificate(s) for a ship. In case that ship's certificates were issued by more than one ROs, the inspection and detention would be counted to each of them.

Table 7: DEFICIENCIES BY CATEGORIES

Nature of deficiencies		No. of deficiencies
Certificate & Documentation	Crew Certificates	877
	Documents	2,571
	Ship Certificates	1,038
Structural Conditions		1,454
Water/Weathertight conditions		3,092
Emergency Systems		3,418
Radio Communications		964
Cargo operations including equipment		488
Fire safety		7,107
Alarms		367
Safety of Navigation		6,405
Life saving appliances		5,918
Dangerous goods		48
Propulsion and auxiliary machinery		2,337
Working and Living Conditions	Living Conditions	323
	Working Conditions	1,412
Labour Conditions	Minimum requirements for seafarers	22
	Conditions of employment	385
	Accommodation, recreational facilities, food and catering	1,245
	Health protection, medical care, social security	2,647
Pollution prevention	Anti Fouling	7
	Ballast Water	686
	MARPOL Annex I	766
	MARPOL Annex II	18
	MARPOL Annex III	9
	MARPOL Annex IV	490
	MARPOL Annex V	1,003
	MARPOL Annex VI	312
ISM		988
Other		372
Total		46,769
ISPS		802
Grand total		47,571

SUMMARY OF PORT STATE INSPECTION DATA 2020 – 2022

Table 8: BLACK – GREY – WHITE LISTS *

Flag	Inspections 2020-2022	Detentions 2020-2022	Black to Grey Limit	Grey to White Limit	Excess Factor
BLACK LIST					
Dominica	31	8	5		3.32
Mongolia	240	31	24		1.86
Togo	630	66	55		1.52
Sierra Leone	896	80	76		1.14
GREY LIST					
Cook Islands	78	6	10	1	0.56
Gibraltar (UK)	49	3	7	0	0.44
Palau	156	10	17	5	0.42
Kiribati	51	3	7	0	0.42
Belize	1,981	134	158	119	0.38
India	91	5	11	2	0.35
Qatar	30	1	5	0	0.30
Croatia	48	2	7	0	0.30
Jamaica	53	2	7	0	0.26
Saint Vincent and the Grenadines	83	3	10	1	0.18
Belgium	65	2	8	1	0.17
Russian Federation	138	6	15	4	0.16
Barbados	73	2	9	1	0.12
Antigua and Barbuda	450	24	41	22	0.10
United States of America	78	2	10	1	0.09
Netherlands	171	6	18	6	0.00
WHITE LIST					
Niue	32	0	5	-1	0
Iran	36	0	6	0	0
Luxembourg	44	0	6	0	0
Saudi Arabia	59	0	8	0	-0.40
Italy	141	3	15	4	-0.45
Indonesia	550	21	49	28	-0.50
Türkiye	71	0	9	1	-0.71
France	72	0	9	1	-0.73
Bangladesh	257	6	25	11	-0.77
Malaysia	459	13	42	23	-0.82
Vanuatu	79	0	10	1	-0.86
United Kingdom (UK)	277	6	27	12	-0.88
Bermuda (UK)	83	0	10	1	-0.93

Flag	Inspections 2020-2022	Detentions 2020-2022	Black to Grey Limit	Grey to White Limit	Excess Factor
Philippines	334	6	32	15	-1.14
Taiwan, China	273	4	27	12	-1.20
Tuvalu	273	4	27	12	-1.20
Panama	18,332	527	1341	1226	-1.31
Denmark	389	6	36	18	-1.32
Greece	488	8	44	24	-1.35
Liberia	7,513	196	563	489	-1.36
Germany	115	0	13	3	-1.37
Portugal	630	11	55	33	-1.38
Cyprus	1,011	19	85	57	-1.42
Bahamas	1,413	28	115	83	-1.44
Isle of Man (UK)	343	4	32	16	-1.44
Thailand	585	9	52	30	-1.45
Norway	548	8	49	28	-1.46
Cayman Islands (UK)	196	1	20	7	-1.50
Marshall Islands	6,865	145	516	445	-1.53
Viet Nam	1,935	33	154	116	-1.58
Malta	2,106	36	167	128	-1.59
Japan	477	4	43	24	-1.70
Korea, Republic of	1,944	27	155	117	-1.70
Hong Kong, China	6,783	97	510	440	-1.77
Singapore	4,731	62	361	302	-1.80
China	1,745	8	140	104	-2.21

- Note:** 1) Flags listed above are those of ships which were involved in 30 or more port State inspections over the 3-year period.
- 2) According to the decision by the Port State Control Committee, flags involving 30-49 port State inspections with nil detentions are listed on top of the White List.

* See explanatory note on page 53.

$p=7\%$

$z_{95\%}=1.645$

$q=3\%$

Table 9: INSPECTIONS AND DETENTIONS PER FLAG

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2020	2021	2022	Total	2020	2021	2022	Total	
Algeria	2	1	2	5	0	0	0	0	0
Antigua and Barbuda	143	142	165	450	4	8	12	24	5.33
Argentina	1	0	0	1	0	0	0	0	0
Australia	1	1	2	4	0	1	1	2	50.00
Bahamas	417	441	555	1,413	11	8	9	28	1.98
Bahrain	0	1	1	2	0	0	0	0	0.00
Bangladesh	88	93	76	257	3	1	2	6	2.33
Barbados	24	18	31	73	1	1	0	2	2.74
Belgium	25	16	24	65	0	0	2	2	3.08
Belize	533	674	774	1,981	26	39	69	134	6.76
Bermuda (UK)	30	24	29	83	0	0	0	0	0
Bolivia	0	2	3	5	0	0	1	1	20.00
Brazil	1	0	4	5	0	0	0	0	0
Brunei Darussalam	2	4	3	9	0	0	0	0	0
Cambodia	2	0	1	3	0	0	0	0	0
Cameroon	6	7	15	28	2	1	2	5	17.86
Cayman Islands (UK)	77	68	51	196	0	1	0	1	0.51
Chile	9	4	10	23	0	0	0	0	0
China	405	523	817	1,745	2	3	3	8	0.46
Colombia	0	1	0	1	0	0	0	0	0
Comoros	3	2	4	9	1	1	1	3	33.33
Cook Islands	27	24	27	78	0	4	2	6	7.69
Croatia	24	17	7	48	2	0	0	2	4.17
Curacao	9	5	9	23	0	0	0	0	0
Cyprus	314	340	357	1,011	8	4	7	19	1.88
Denmark	83	141	165	389	4	1	1	6	1.54
Djibouti	1	4	6	11	0	1	1	2	18.18
Dominica	11	10	10	31	2	3	3	8	25.81
Ecuador	3	5	5	13	2	0	0	2	15.38
Egypt	2	3	3	8	1	0	0	1	12.50
Equatorial Guinea	0	1	0	1	0	0	0	0	0
Ethiopia	2	1	9	12	1	0	1	2	16.67
Falkland Islands (UK) (Malvinas)	0	1	1	2	0	0	0	0	0
Faroe Islands (Denmark)	0	0	2	2	0	0	0	0	0
Fiji	1	0	0	1	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2020	2021	2022	Total	2020	2021	2022	Total	
Finland	0	1	1	2	0	0	0	0	0
France	19	24	29	72	0	0	0	0	0
Gabon	4	5	15	24	0	0	2	2	8.33
Germany	34	38	43	115	0	0	0	0	0
Ghana	0	0	1	1	0	0	1	1	100.00
Gibraltar (UK)	19	18	12	49	0	1	2	3	6.12
Greece	169	160	159	488	3	4	1	8	1.64
Guinea-Bissau	0	0	5	5	0	0	1	1	20.00
Guyana	0	3	7	10	0	1	4	5	50.00
Honduras	2	0	0	2	0	0	0	0	0
Hong Kong, China	1,907	2,586	2,290	6,783	35	31	31	97	1.43
India	33	31	27	91	1	3	1	5	5.49
Indonesia	151	140	259	550	6	5	10	21	3.82
Iran	6	13	17	36	0	0	0	0	0
Ireland	0	0	1	1	0	0	0	0	0
Isle of Man (UK)	95	143	105	343	1	2	1	4	1.17
Israel	1	0	0	1	0	0	0	0	0.00
Italy	57	44	40	141	1	2	0	3	2.13
Jamaica	16	15	22	53	2	0	0	2	3.77
Japan	143	148	186	477	2	1	1	4	0.84
Jordan	0	1	1	2	0	0	0	0	0
Kiribati	17	16	18	51	2	0	1	3	5.88
Korea, Democratic People's Republic	13	1	0	14	2	0	0	2	14.29
Korea, Republic of	558	644	742	1,944	6	11	10	27	1.39
Kuwait	5	7	7	19	0	0	0	0	0
Liberia	2,072	2,512	2,929	7,513	66	57	73	196	2.61
Libya	1	2	1	4	0	0	0	0	0
Lithuania	0	0	1	1	0	0	1	1	100.00
Luxembourg	14	16	14	44	0	0	0	0	0
Malaysia	126	143	190	459	2	1	10	13	2.83
Maldives	0	0	1	1	0	0	0	0	0
Malta	698	726	682	2,106	15	13	8	36	1.71
Marshall Islands	2,015	2,353	2,497	6,865	49	47	49	145	2.11
Mauritius	0	1	0	1	0	0	0	0	0
Micronesia, Federated States of	1	1	0	2	0	1	0	1	50.00
Moldova	1	1	1	3	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2020	2021	2022	Total	2020	2021	2022	Total	
Mongolia	69	64	107	240	5	15	11	31	12.92
Montenegro	5	6	6	17	0	0	2	2	11.76
Myanmar	5	5	7	17	0	1	0	1	5.88
Nauru	3	0	4	7	0	0	1	1	14.29
Netherlands	52	55	64	171	2	2	2	6	3.51
New Zealand	2	2	2	6	0	0	0	0	0
Niue	8	15	9	32	0	0	0	0	0
Norway	167	188	193	548	5	1	2	8	1.46
Pakistan	4	6	6	16	1	1	0	2	12.50
Palau	35	51	70	156	4	1	5	10	6.41
Panama	5,373	6,195	6,764	18,332	139	145	243	527	2.87
Papua New Guinea	1	0	1	2	0	0	0	0	0
Peru	2	2	1	5	0	1	0	1	20.00
Philippines	91	107	136	334	2	2	2	6	1.80
Portugal	173	210	247	630	2	4	5	11	1.75
Qatar	10	12	8	30	1	0	0	1	3.33
Russian Federation	74	26	38	138	4	0	2	6	4.35
Saint Kitts and Nevis	2	5	4	11	0	1	0	1	9.09
Saint Vincent and the Grenadines	28	25	30	83	0	1	2	3	3.61
Samoa	0	1	0	1	0	0	0	0	0
Saudi Arabia	14	19	26	59	0	0	0	0	0
Sierra Leone	218	311	367	896	16	29	35	80	8.93
Singapore	1,388	1,590	1,753	4,731	17	15	30	62	1.31
Solomon Islands	0	1	0	1	0	0	0	0	0
South Africa	3	1	0	4	0	0	0	0	0
Spain	4	6	10	20	1	0	0	1	5.00
Sri Lanka	2	6	3	11	0	1	0	1	9.09
Sweden	3	8	12	23	0	0	0	0	0
Switzerland	9	9	5	23	0	0	0	0	0
Taiwan, China	94	95	84	273	1	1	2	4	1.47
Tanzania	1	7	14	22	0	5	6	11	50.00
Thailand	202	188	195	585	4	3	2	9	1.54
Togo	218	211	201	630	17	23	26	66	10.48
Türkiye	25	23	23	71	0	0	0	0	0
Tuvalu	87	93	93	273	0	2	2	4	1.47
Ukraine	3	5	5	13	2	0	1	3	23.08

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2020	2021	2022	Total	2020	2021	2022	Total	
United Kingdom (UK)	78	102	97	277	1	2	3	6	2.17
United States of America	17	25	36	78	0	0	2	2	2.56
Vanuatu	28	29	22	79	0	0	0	0	0
Viet Nam	495	660	780	1,935	6	12	15	33	1.71
Ship's registration withdrawn	0	1	0	1	0	1	0	1	100.00
Total	19,416	22,732	24,894	67,042	493	526	725	1,744	2.60

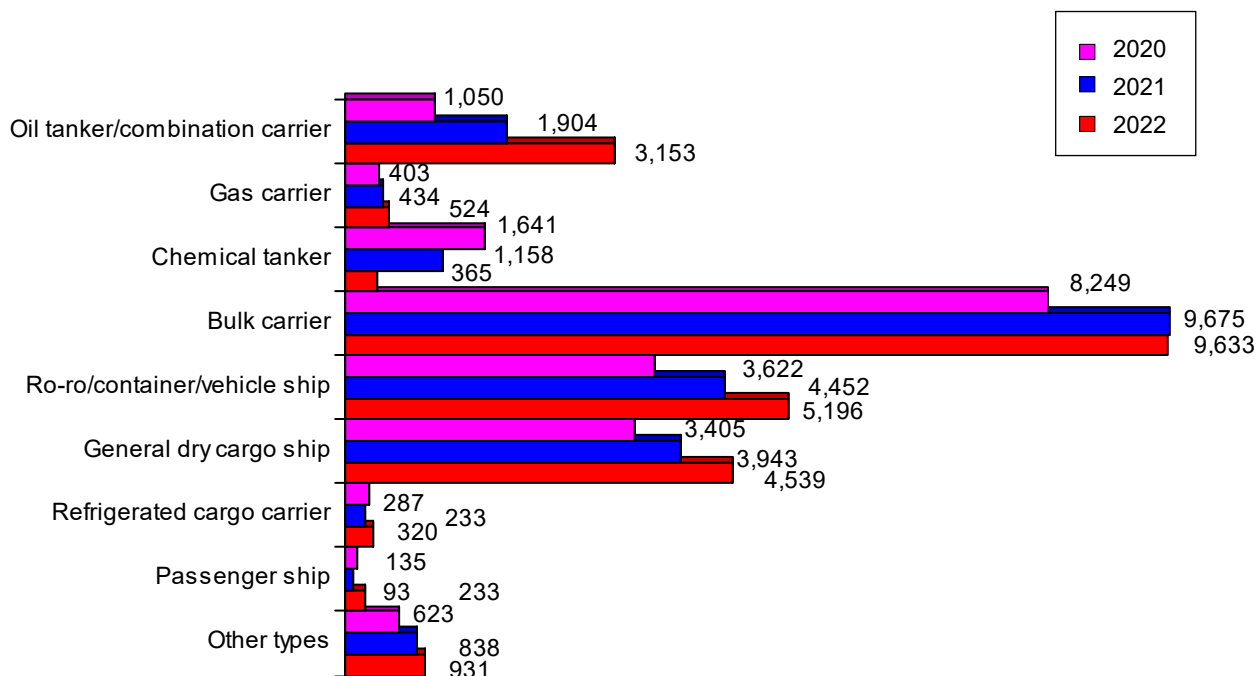
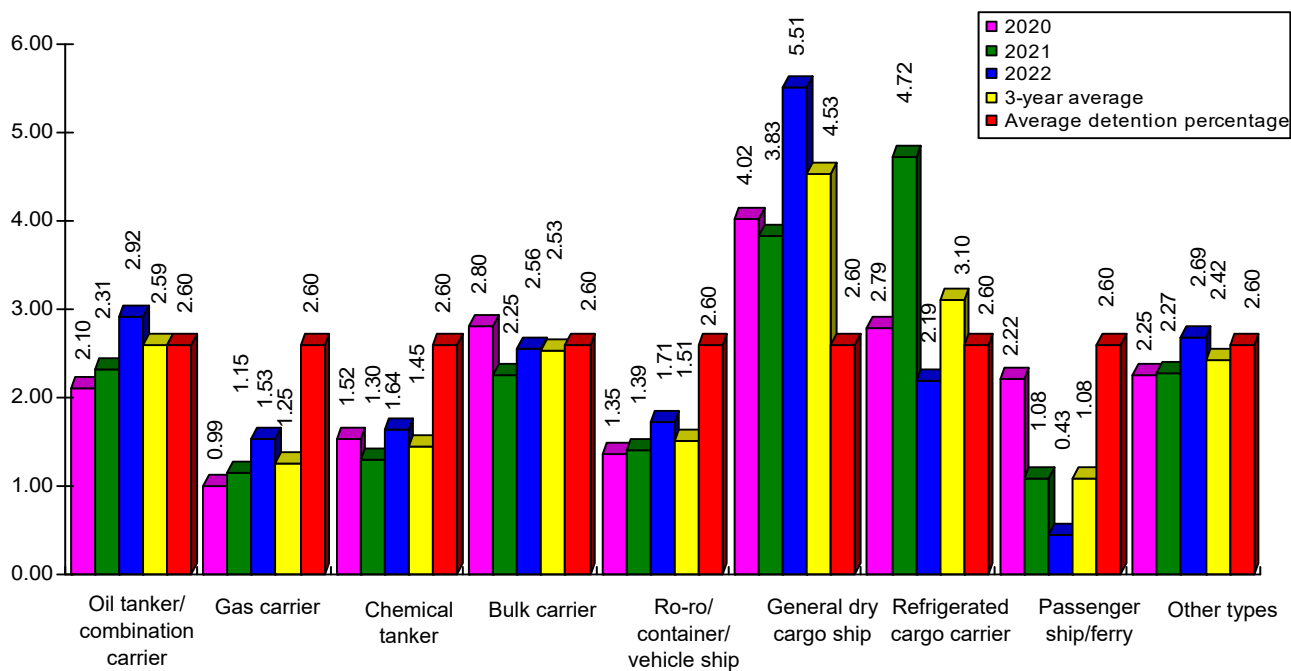
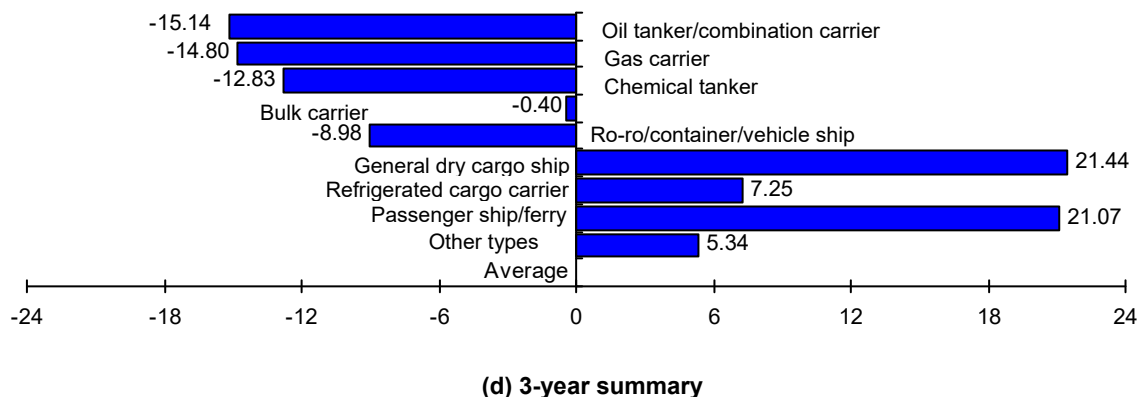
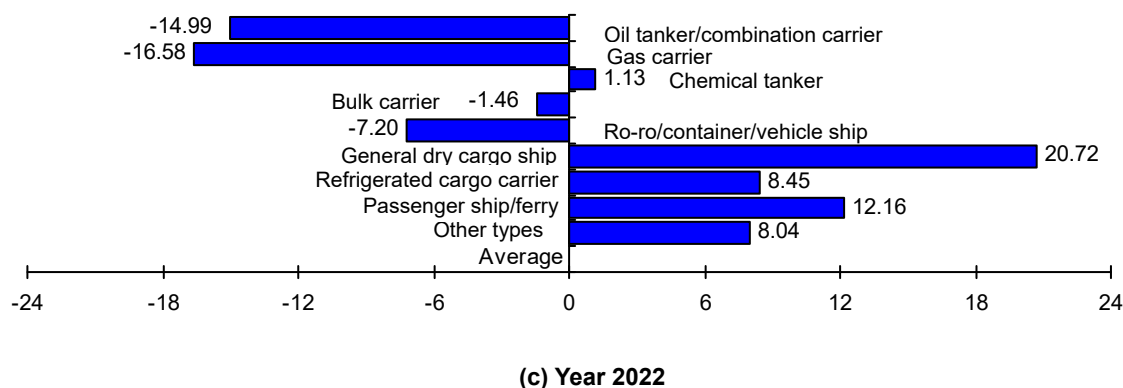
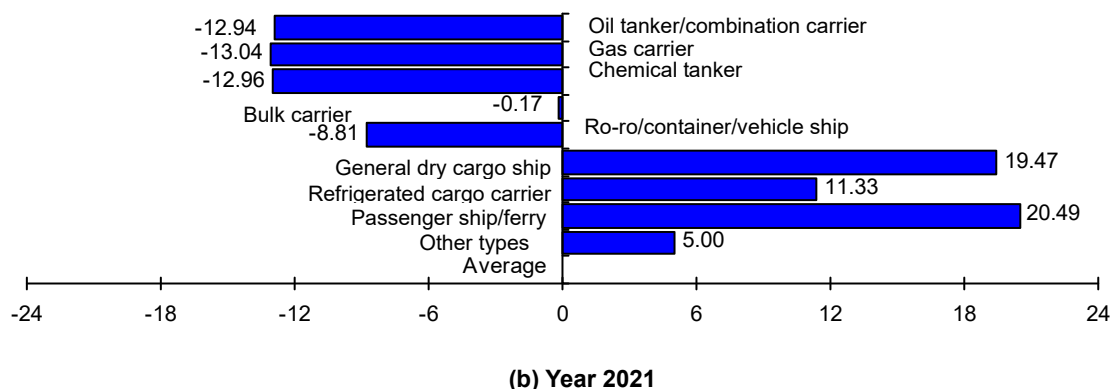
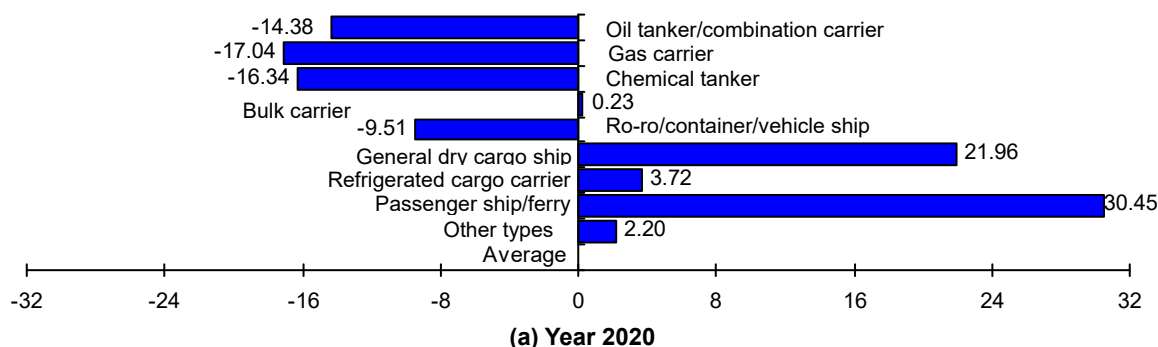
Figure 15: COMPARISON OF INSPECTIONS PER SHIP TYPE**Figure 16: COMPARISON OF DETENTIONS PER SHIP TYPE**

Table 10: INSPECTIONS AND DETENTIONS PER SHIP TYPE

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2020	2021	2022	Total	2020	2021	2022	Total	
NLS tanker	56	61	39	156	1	1	2	4	2.56
Combination carrier	14	22	10	46	0	0	0	0	0
Oil tanker	980	1,823	3,104	5,907	21	43	90	154	2.61
Gas carrier	403	434	524	1,361	4	5	8	17	1.25
Chemical tanker	1,641	1,158	365	3,164	25	15	6	46	1.45
Bulk carrier	8,250	9,675	9,633	27,558	231	218	247	696	2.53
Vehicle carrier	465	495	661	1,621	6	5	6	17	1.05
Container ship	3,097	3,896	4,451	11,444	41	52	76	169	1.48
Ro-Ro cargo ship	60	61	84	205	2	5	7	14	6.83
General cargo/multi-purpose ship	3,405	3,943	4,539	11,887	137	151	250	538	4.53
Refrigerated cargo carrier	287	233	320	840	8	11	7	26	3.10
Woodchip carrier	174	231	249	654	4	2	5	11	1.68
Livestock carrier	38	45	43	126	2	3	0	5	3.97
Ro-Ro Passenger ship	37	55	58	150	0	0	1	1	0.67
Passenger ship	98	38	175	311	3	1	0	4	1.29
Factory ship	2	4	2	8	1	1	1	3	37.50
Heavy load carrier	63	77	47	187	3	4	1	8	4.28
Offshore service vessel	50	83	101	234	0	2	1	3	1.28
MODU & FPSO	2	1	4	7	0	0	0	0	0
High speed passenger craft	11	4	26	41	0	0	0	0	0
Special purpose ship	31	44	46	121	0	1	3	4	3.31
Tugboat	134	142	199	475	1	3	6	10	2.11
Others	118	207	214	539	3	3	8	14	2.60
Total	19,416	22,732	24,894	67,042	493	526	725	1,744	2.60

Figure 17: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

* % over [+] or under [-] average

Table 11: INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

Type of ship	Number of inspections				Number of inspections with deficiencies				3-year average percentage %
	2020	2021	2022	Total	2020	2021	2022	Total	
Oil tanker/combination carrier	1,050	1,906	3,153	6,109	377	664	1,133	2,174	35.59
Gas carrier	403	434	524	1,361	134	175	180	489	35.93
Chemical tanker	1,641	1,158	365	3,164	557	452	190	1,199	37.90
Bulk carrier	8,250	9,675	9,633	27,558	4,167	4,937	4,765	13,869	50.33
Ro-ro/container/vehicle ship	3,622	4,452	5,196	13,270	1,477	1,791	2,272	5,540	41.75
General dry cargo ship	3,405	3,943	4,539	11,887	2,460	2,866	3,252	8,578	72.16
Refrigerated cargo carrier	287	233	320	840	155	142	190	487	57.98
Passenger ship	135	93	233	461	109	75	147	331	71.80
Other types	623	838	931	2,392	327	465	549	1,341	56.06
Total	19,416	22,732	24,894	67,042	9,763	11,567	12,678	34,008	50.73

Table 12: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2020-2022	No. of overall detentions 2020-2022	No. of RO responsible detentions 2020-2022	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Aegean Register of Shipping	1	0	0	0	0	0
Alpha Ship Classification	67	0	0	0	0	0
American Bureau of Shipping	8,669	171	3	1.97	0.03	1.75
Asia Classification Society	20	0	0	0	0	0
Asia Shipping Certification Services	104	14	5	13.46	4.81	35.71
Azure Naval Architects BV	5	1	0	20.00	0	0
Biro Klasifikasi Indonesia	426	16	1	3.76	0.23	6.25
Bolivian Register of Shipping	4	1	0	25.00	0	0
Bulgarski Koraben Registar	7	0	0	0	0	0
Bureau Veritas	9,177	248	8	2.70	0.09	3.23
China Classification Society	6,246	86	1	1.38	0.02	1.16
Columbus American Register	7	0	0	0	0	0
Cosmos Marine Bureau	390	39	1	10.00	0.26	2.56
CR Classification Society	435	6	1	1.38	0.23	16.67
Croatian Register of Shipping	90	3	0	3.33	0	0
Cyprus Bureau of Shipping	16	1	0	6.25	0	0
Danforth Marinesurvey & Certification Services	2	0	0	0	0	0
DNV AS	16,178	328	5	2.03	0.03	1.52
Dromon Bureau of Shipping	246	13	2	5.28	0.81	15.38
Emirates Classification Society TASNEEF	1	0	0	0	0	0
Foresight Ship Classification	113	9	4	7.96	3.54	44.44
Global Marine Bureau	1	0	0	0	0	0
Hellas Naval Bureau of Shipping S.M.P.C	6	2	0	33.33	0	0
Hellenic Register of Shipping	7	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	1	0	0	0	0	0
Horizon International of Naval Surveying and Inspection Bureau, S.A.	1	0	0	0	0	0
Indian Register of Shipping	167	9	0	5.39	0	0
Intermaritime Certification Services, S.A.	2,156	116	11	5.38	0.51	9.48
International Marine Survey Association	4	2	0	50.00	0	0
International Maritime Register	38	1	0	2.63	0	0
International Naval Surveys Bureau	43	7	0	16.28	0	0
International Register of Shipping	305	21	0	6.89	0	0
International Ship Classification	131	6	0	4.58	0	0
Iranian Classification Society	45	2	0	4.44	0	0
Isthmus Bureau of Shipping	1,049	51	2	4.86	0.19	3.92
Isthmus Maritime Classification Society S.A.	8	2	0	25.00	0	0
Korea Classification Society (former Joson Classification Society)	77	3	0	3.90	0	0
Korea Maritime Transportation Safety Authority	3	0	0	0	0	0
Korea Ship Safety Technology Authority	9	0	0	0	0	0
KOREAN REGISTER	6,037	121	13	2.00	0.22	10.74
Lindal Marine Services	8	0	0	0	0	0
Lloyd's Register	10,008	204	13	2.04	0.13	6.37
M&P Surveyors, S. de R.L. de C.V.	2	0	0	0	0	0
Macosnar Corporation	93	2	0	2.15	0	0

Recognized organization (RO)	No. of overall inspections 2020-2022	No. of overall detentions 2020-2022	No. of RO responsible detentions 2020-2022	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Maritime Bureau of Shipping	9	0	0	0	0	0
Maritime Lloyd Ltd, Georgia	2	0	0	0	0	0
Maritime Technical Systems and Services	27	0	0	0	0	0
National Shipping Adjusters Inc	46	2	0	4.35	0	0
Nautx, Ltd	5	0	0	0	0	0
New United International Marine Services Ltd	122	8	0	6.56	0	0
Nippon Kaiji Kyokai	24,644	476	28	1.93	0.11	5.88
Novel Classification Society S.A.	15	4	0	26.67	0	0
Overseas Marine Certification Services	1,356	76	9	5.60	0.66	11.84
Panama Maritime Documentation Services	1,319	76	6	5.76	0.45	7.89
Panama Shipping Registrar Inc.	111	8	0	7.21	0	0
Phoenix Register of Shipping	23	0	0	0	0	0
Polski Rejestr Statkow	149	10	2	6.71	1.34	20.00
Qualitas Register of Shipping S.A.	73	1	0	1.37	0	0
Registro Brasileiro de Navios de Aeronaves	2	0	0	0	0	0
RINA Services S.p.A.	2,998	94	3	3.14	0.10	3.19
RINAVE Portuguesa	4	0	0	0	0	0
Royal Bureau of Shipping	3	2	1	66.67	33.33	50.00
RS Classification Services MON IKE	1	0	0	0	0	0
Russian Maritime Register of Shipping	425	15	0	3.53	0	0
Russian River Register	3	0	0	0	0	0
Ship Classification Malaysia	30	1	1	3.33	3.33	100.00
Shipping Register of Ukraine	13	3	0	23.08	0	0
SingClass International Pte Ltd	48	3	0	6.25	0	0
Sing-Lloyd	66	7	1	10.61	1.52	14.29
Union Bureau of Shipping	534	71	11	13.30	2.06	15.49
United Maritime Survey	2	1	0	50.00	0	0
Universal Maritime Bureau	442	36	5	8.14	1.13	13.89
Universal Shipping Bureau	1	0	0	0	0	0
Vega Register Inc.	9	1	0	11.11	0	0
Veritas Register of Shipping	8	0	0	0	0	0
Vietnam Register	2,020	35	6	1.73	0.30	17.14
Other	136	28	3	20.59	2.21	10.71

See also the note in page 32.

Table 13: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2020-2022	No. of RO responsible detentions 2020-2022	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Asia Shipping Certification Services	104	5	5	0	1.05	Low
Foresight Ship Classification	113	4	5	0	0.80	Medium
Union Bureau of Shipping	534	11	17	5	0.53	
Sing-Lloyd	66	1	4	0	0.43	
Polski Rejestr Statkow	149	2	6	0	0.35	
Dromon Bureau of Shipping	246	2	9	1	0.14	
Universal Maritime Bureau	442	5	14	3	0.14	
Cosmos Marine Bureau	390	1	13	3	-0.68	High
Biro Klasifikasi Indonesia	426	1	14	3	-0.79	
CR Classification Society	435	1	14	3	-0.81	
Overseas Marine Certification Services	1,356	9	36	18	-0.82	
International Register of Shipping	305	0	11	2	-0.84	
Panama Maritime Documentation Services	1,319	6	35	18	-1.10	
Intermaritime Certification Services, S.A.	2,156	11	54	32	-1.18	
Russian Maritime Register of Shipping	425	0	14	3	-1.43	
Vietnam Register	2,020	6	51	30	-1.49	
Isthmus Bureau of Shipping	1,049	2	29	13	-1.52	
KOREAN REGISTER	6,037	13	139	102	-1.72	
RINA Services S.p.A.	2,998	3	73	47	-1.83	
Lloyd's Register	10,008	13	224	177	-1.84	
Nippon Kaiji Kyokai	24,644	28	530	456	-1.87	
Bureau Veritas	9,177	8	206	161	-1.89	
American Bureau of Shipping	8,669	3	195	151	-1.95	
DNV AS	16,178	5	353	294	-1.96	
China Classification Society	6,246	1	144	106	-1.97	

- Note:** 1) In this table, only recognized organizations (RO) that had more than 60 inspections are taken into account. The formula used is identical to the one used for the Black-Grey-White List. However, the values for P and Q are adjusted to P=2% and Q=1%.
- 2) ROs involving 60-179 inspections with zero detention are not included in this table.

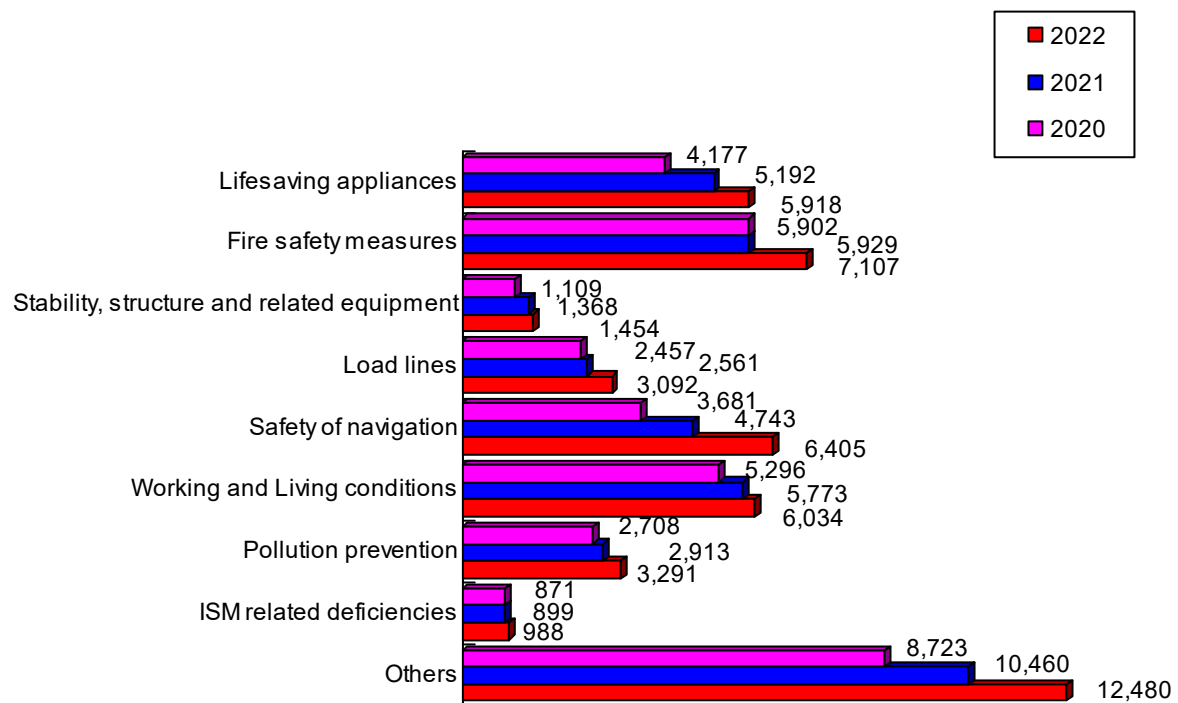
Figure 18: COMPARISON OF NUMBER OF DEFICIENCIES BY MAIN CATEGORIES

Table 14: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency		Number of deficiencies		
		2020	2021	2022
Certificate & Documentation	Crew Certificates	765	803	877
	Documents	1,427	1,955	2,571
	Ship Certificates	601	880	1,038
Structural Conditions		1,109	1,368	1,454
Water/Weathertight conditions		2,457	2,561	3,092
Emergency Systems		2,278	2,897	3,418
Radio Communications		578	831	964
Cargo operations including		403	436	488
Fire safety		5,902	5,929	7,107
Alarms		259	254	367
Safety of Navigation		3,681	4,743	6,405
Life saving appliances		4,177	5,192	5,918
Dangerous goods		36	38	48
Propulsion and auxiliary		2,073	2,050	2,337
Working and Living Conditions	Living Conditions	303	380	323
	Working Conditions	1,311	1,321	1,412
Labour Conditions	Minimum requirements for seafarers	37	34	22
	Conditions of employment	523	441	385
	Accommodation, recreational facilities, food and catering	1,032	1,221	1,245
	Health protection, medical care, social security	2,090	2,376	2,647
Pollution prevention	Anti Fouling	6	13	7
	Ballast Water	384	563	686
	MARPOL Annex I	723	712	766
	MARPOL Annex II	11	7	18
	MARPOL Annex III	11	9	9
	MARPOL Annex IV	456	366	490
	MARPOL Annex V	745	920	1,003
	MARPOL Annex VI	372	323	312
ISM		871	899	988
Other		303	316	372
Total		34,924	39,838	46,769
ISPS		623	632	802
Grand total		35,547	40,470	47,571

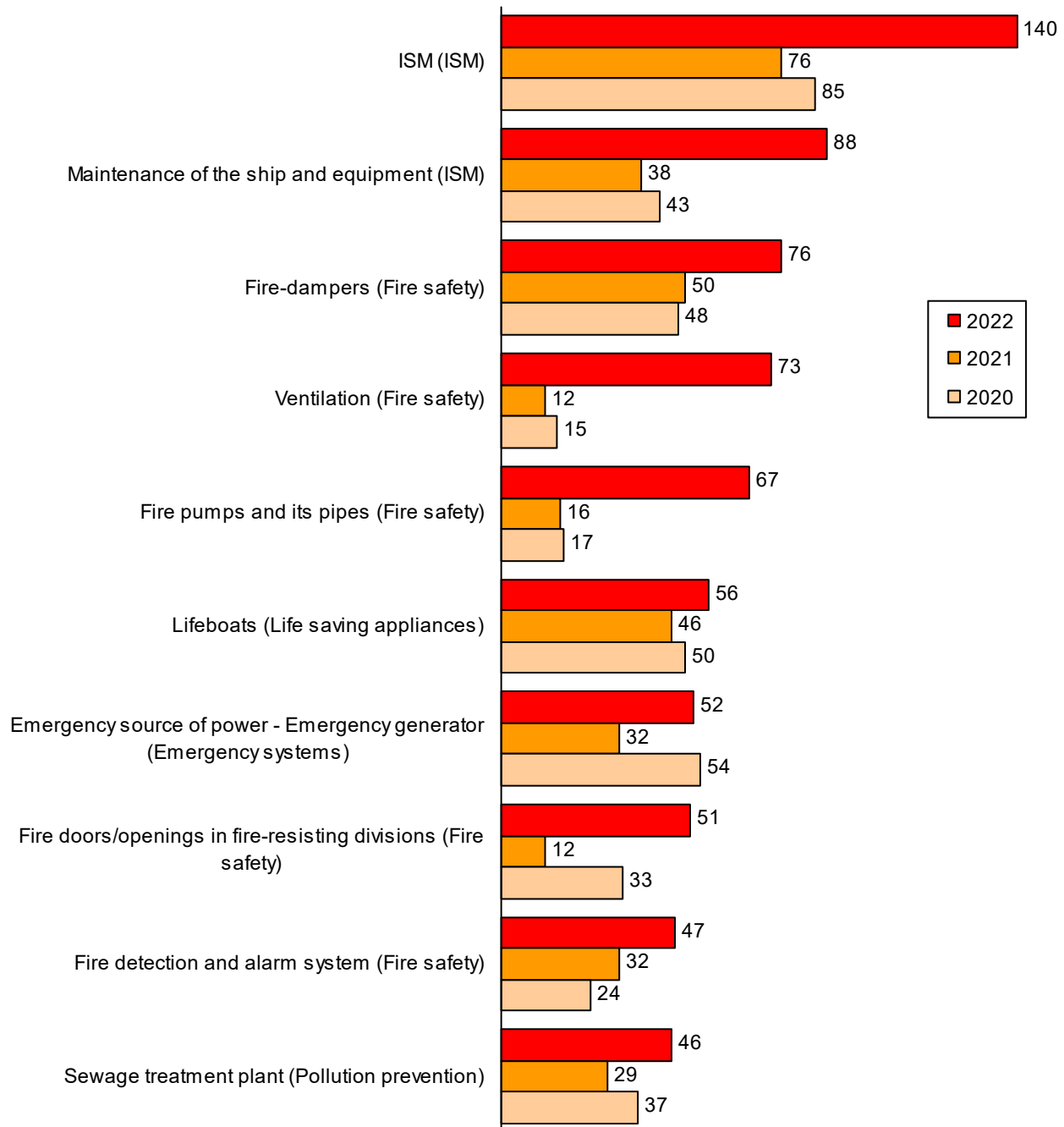
Figure 19: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

Table 15: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

No.	Most frequent deficiencies	Year		
		2020	2021	2022
1	ISM (ISM)	85	76	140
2	Maintenance of the ship and equipment (ISM)	43	38	88
3	Fire-dampers (Fire safety)	48	50	76
4	Ventilation (Fire safety)	15	12	73
5	Fire pumps and its pipes (Fire safety)	17	16	67
6	Lifeboats (Life saving appliances)	50	46	56
7	Emergency source of power - Emergency generator (Emergency systems)	54	32	52
8	Fire doors/openings in fire-resisting divisions (Fire safety)	33	12	51
9	Fire detection and alarm system (Fire safety)	24	32	47
10	Sewage treatment plant (Pollution prevention)	37	29	46

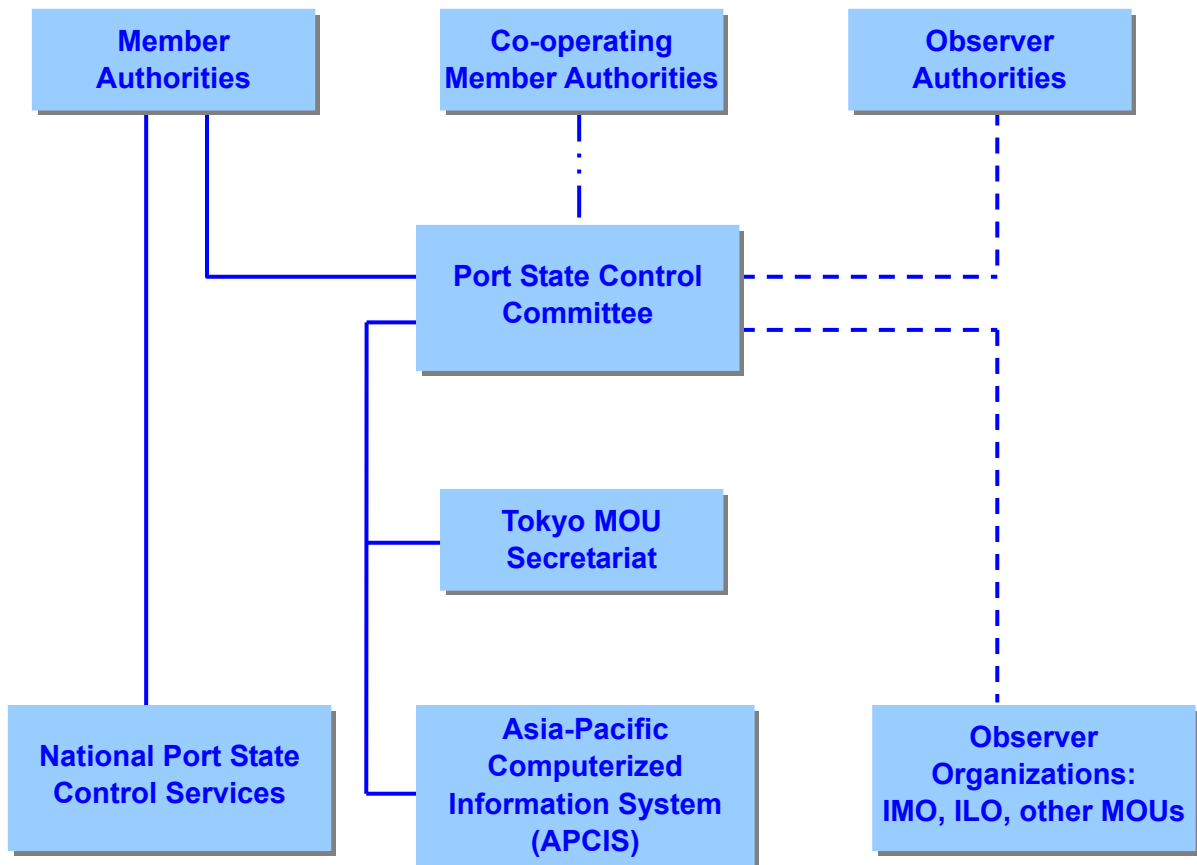
Table 16: LIST OF UNDER-PERFORMING SHIPS

IMO No.	Ship name (At the day of detention)	Flag	IMO company No.	No. of times on the list
8653085	EN JI 17	Belize	6189761	6
8747616	JIN HONG DA 17	Sierra Leone	6289368	3
9014119 ¹	SAOSHYANT	Panama	6255613	5
9014119 ¹	SAOSHYANT	Panama	6255627	5
9153745	ELGA	Togo	5707873	6
9156541	CHEM LUCK	Singapore	6147830	1
9193599 ²	POLAR STAR	Panama	6096873	2
9193599 ²	MORIOKA	Marshall Islands	5528362	2
9255945 ²	DIAMOND	Tanzania	6176451	3
9255945 ²	YOLANDA	Guyana	6178580	3
9373802 ²	V MIRACLE	Panama	6092204	7
9373802 ²	AMBA	Togo	5519245	7

1. The ship changed company.
2. The ship changed name, flag and company.

ANNEX 3

ORGANIZATIONAL STRUCTURE OF THE TOKYO MOU



EXPLANATORY NOTE ON THE BLACK – GREY – WHITE LISTS

The Port State Control Committee adopted the same method as used by the Paris MOU for assessment of performance of flags. Compared to the calculation method of previous year, this system has the advantage of providing an excess percentage that is significant and also reviewing the number of inspections and detentions over a 3-year period at the same time, based on binomial calculus.

The performance of each flag State is calculated using a standard formula for statistical calculations in which certain values have been fixed in accordance with the agreement of the Port State Control Committee. Two limits have been included in the new system, the 'black to grey' and the 'grey to white' limit, each with its own specific formula:

$$u_{\text{black to grey}} = N \cdot p + 0.5 + z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

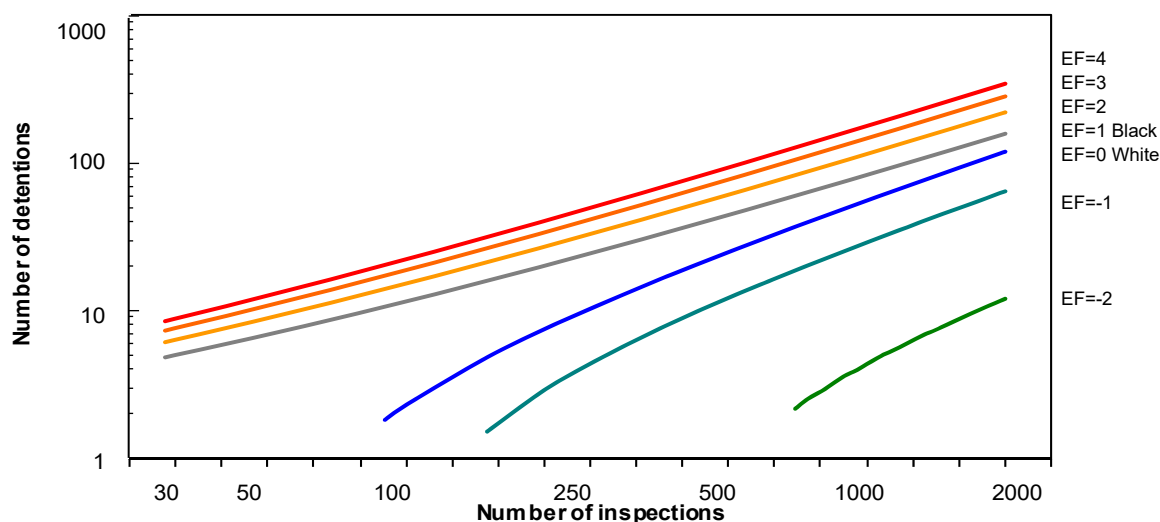
$$u_{\text{white to grey}} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

In the formula "N" is the number of inspections, "p" is the allowable detention limit (yardstick), set to 7% by the Tokyo MOU Port State Control Committee, and "z" is the significance requested (z=1.645 for a statistically acceptable certainty level of 95%). The result "u" is the allowed number of detentions for either the black or white list. The "u" results can be found in the table as the 'black to grey' or the 'grey to white' limit. A number of detentions above this 'black to grey' limit means significantly worse than average, where a number of detentions below the

'grey to white' limit means significantly better than average. When the number of detentions for a particular flag State is positioned between the two, the flag State will find itself on the grey list. The formula is applicable for sample sizes of 30 or more inspections over a 3-year period.

To sort results on the black or white list, simply alter the target and repeat the calculation. Flags which are still significantly above this second target are worse than the flags which are not. This process can be repeated, to create as many refinements as desired. (Of course the maximum detention rate remains 100%!) To make the flags' performance comparable, the excess factor (EF) is introduced. Each incremental or decremental step corresponds with one whole EF-point of difference. Thus the excess factor EF is an indication for the number of times the yardstick has to be altered and recalculated. Once the excess factor is determined for all flags, the flags can be ordered by EF. The excess factor can be found in the last column the black, grey or white list. The target (yardstick) has been set on 7% and the size of the increment and decrement on 3%. The Black – Grey – White lists have been calculated in accordance with the above principles.

The graphical representation of the system, below, is showing the direct relations between the number of inspected ships and the number of detentions. Both axis have a logarithmic character.



TOKYO MOU SECRETARIAT

The Secretariat (Tokyo MOU Secretariat) of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region is located in Tokyo, Japan. The Secretariat may be approached for further information or inquiries on the operation of the Memorandum.

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