

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

2019



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FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2019**.

The year 2019 saw the membership of the Tokyo MOU acting proactively in addressing emerging issues. This included cooperation with the Paris MOU to conduct an information campaign with a view to promoting timely compliance with the new sulphur limit requirements on marine fuel oil used by the shipping industry. The sulphur cap came into effect on 01 January 2020 and experience suggests the information campaign carried out in 2019 was effective.

The sulphur cap is considered to be a significant mechanism in improving human health and is another step by the international community to make shipping cleaner. The importance clean shipping to the environment was highlighted at the 30th meeting of the Port State Control Committee of the Tokyo MOU held in the Marshall Islands. The committee reflected on the fact that the Marshall Islands are entirely dependent on shipping for their economic wellbeing but are also directly affected by environmental concerns. Noting forthcoming actions in regards to greenhouse gases it is anticipated that this subject will be discussed at length in future meetings.

Membership of Tokyo MOU was further expanded in 2019 upon with the acceptance of Panama as the 21st full member of the MOU. With Panama as a member of the MOU four of the top five world largest flags (namely: Panama, Marshall Islands, Hong Kong (China) and Singapore) are members of the Tokyo MOU. Such is the composition of Tokyo MOU membership that the port, coastal and flag state interests are effectively represented. It is anticipated this diverse membership will enable the MOU to influence flag State performance and foster the growth in, and effectiveness of, PSC activities in the region and beyond.

This Annual Report summarizes port State control activities and developments in the Tokyo MOU in 2019. Moreover, the report also provides port State control statistics and analysis on the results of inspections carried out by member Authorities during the year.

It is noted that both number of detentions and detention percentage increased in 2019, after respective seven years' and ten years' continuous decrease. It is further observed that the number of under-performing ships published and number of individual ships involved also rose in 2019. These increases are considered as the encouraging outcome of improvement and enhancement on targeting or selecting ships for inspections and, emphasis on inspection

of under-performing ships by the member Authorities, based on the observation of continuous increase of inspections of high risk ships and under-performing ships.

ISM related detainable deficiencies have remained in the top three detainable deficiency categories for several years. One third of all detentions are on the grounds of a major non-compliance with ISM reflecting the importance of ISM to the effective operation of ships. The average number of detainable deficiencies per detention is trending slowly upwards. As a result the Tokyo MOU will refine enhance measures to inspect high risk and under-performing ships. These inspections will focus on safety management system implemented on board ships and familiarization and understanding of operational requirements by the crew. Operational requirements continue to be an area of concern due to the increasing complexity of shipboard systems and the pace of change and the MOU is looking at mechanisms to address this.

Finally looking forward, environmental concerns and the unheralded COVID-19 events are posing considerable challenges to international shipping and the health, safety and welfare of the crews who operate these ships. The Tokyo MOU will be working to meet these challenges in addition to maintaining pressure on operators of unsafe or substandard ships in order to promote maritime safety and security, to protect the marine environment and to safeguard seafarers' working and living conditions on board ships.



Alex Schultz-Altmann
Chair
Port State Control Committee



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-fifth issue and covers port State control activities and developments in the 2019 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 within 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 Tokyo MOU as a co-operating member Authority.

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: Democratic People's Republic of Korea, Macao (China), Samoa, Solomon Islands, Tonga, 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 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 System is established in the 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;
- 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;
- 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;
- the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001;
- 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.

REVIEW OF YEAR 2019

Minding the approaching of the date of entry into force (1 January 2020) of the requirements of the maximum limit for sulphur content of ship fuel oil as provided in MARPOL Annex VI (known as the global 2020 sulphur cap), the Tokyo MOU, coordinated with the Paris MoU, carried out a joint information campaign by issuing a Letter of Warning to ships found not yet ready for compliance with the relevant requirements during inspections throughout year 2019. The objective of the information campaign was to increase awareness of and to encourage timely compliance with the global 2020 sulphur cap requirements.

The concentrated inspection campaign (CIC) on Emergency Systems and Procedures was conducted from 1 September to 30 November 2019. During the CIC period, a total of 8,243 PSC inspections were conducted by the member Authorities, of which 7,174 were with a CIC inspection. The highest number of CIC inspections relating to ship types were conducted on bulk carriers 2,773 (38.65%), followed by container vessels 1,276 (17.79%)

and general cargo/multipurpose vessels 1,234 (17.20%). The most notable deficiencies found during the campaign were related to the muster list details in accordance with the requirements (178 deficiencies (2.48%)), emergency source of the electrical power supply to essential equipment (151 deficiencies (2.10%)), damage control plan readily available (137 deficiencies (1.91%)), steering gear system and its related emergency alarm operation (127 deficiencies (1.77%)) and capability of the public address system (112 deficiencies (1.56%)). 55 ships were detained as a direct result of the CIC, which represents a CIC detention percentage of 0.77% much lower than the overall detention percentage of 2.62% for the same period. The CIC on Emergency Systems and Procedures was conducted jointly with the Paris MoU. Other regional PSC regimes of the Black Sea MOU, the Indian Ocean MOU and the Viña del Mar Agreement also participated in the CIC.

The trend of continuous decrease of detentions has been maintained for years, which demonstrated the effectiveness of PSC activities by Tokyo MOU member Authorities and improvement of quality of ships operating in the region. It was raised concerns that a fall back tendency in detentions was observed in 2019, under which detentions increased by 49 or 0.17 points, comparing with the previous year. Furthermore, the numbers of under-performing ships published and of individual ships involved were also found in a bounce trend, both of which increased over 20% from the last year. These bounces are considered as the encouraging outcome of improvement and enhancement on targeting or selecting ships for inspections and, emphasis on inspection of under-performing ships by the member Authorities. On the other

hand, such situation warned that the condition and quality of ships operating in the region became worse. Tokyo MOU have to react to this situation actively and effectively through further increasing pressure and enhancing targeting of under-performing ships, high risk ships and substandard ships.

THE PORT STATE CONTROL COMMITTEE

The thirtieth meeting of the Port State Control Committee was held in Majuro, Marshall Islands, from 14 to 17 October 2019. The meeting was hosted by the Ministry of Transportation, Communication & Information Technology of Marshall Islands. The meeting was chaired by Mr. Alex Schultz-Altman, Manager, Ship Inspection and Registration, Operations Division, Australian Maritime Safety Authority (AMSA).

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

The Committee considered the application for full membership by Panama, which had completed the three-year term as a Co-operating Member Authority. The Committee further considered the report of a

fact-finding mission that confirmed full compliance with the qualitative membership criteria by Panama. In accordance with provision of the Memorandum, the Committee unanimously agreed to accept Panama as the 21st member Authority.

The Committee adopted amendments to the Memorandum for change of style of references to PSC procedures adopted by IMO Assembly Resolution, addition of Panama as a member Authority and addition of overriding element for ships choosing a particular port for inspection in order to obtain favourable result to reduce ship risk level and get a wider inspection window. The amendments became effective on 14 October 2019.

The Committee considered a proposal for introduction of the remote follow-up inspection approach, through which PSCOs would be able to verify and close, without physically

visiting the vessel, certain deficiencies in specific circumstances where such a mechanism can be used when there is appropriate and reliable evidence of rectification of deficiencies. The Committee agreed to make a trial on the remote follow-up inspection approach. The Committee considered the matters on lifeboat fall encased by plastic sheaths and on pilot transfer arrangements and decided, for the purpose of bringing attention of the relevant parties of the industry, to publish safety advice/bulletin on those matters on the Tokyo MOU website.

The Committee considered and approved the final report of the 2018 CIC on MARPOL Annex VI. The Committee considered and confirmed the arrangements and preparations for the joint CIC with the Paris MoU on Stability in General in 2020. The Committee was informed of progress made on preparations for the joint CIC with the Paris



The thirtieth Committee meeting, Majuro, October 2019.

MoU on STCW in 2021. The Committee considered possible topics for future CICs. The Committee considered and adopted some further amendments to the policy on joint CICs, taking the amendments by the Paris MoU into account.

The Committee reviewed the analysis report of the most important key performance indicators (KPIs). The Committee considered the matter of common approach for dealing with non-compliance situation upon entry into force of the 2020 global sulphur cap requirements and instructed the MOU Standing Working Group (SWG) to develop the relevant guidance for that purpose. The Committee considered the matter of review and revision of method for performance assessment of flag and RO.

The Committee reviewed and revised the list of follow-up actions emanating from the Ministerial Declaration of “Safeguarding Responsible and Sustainable Shipping” adopted at the 3rd Joint Ministerial Conference of the Paris and the Tokyo Memoranda on Port State Control in Vancouver, Canada, in May 2017. During the course of this process, the Committee considered and agreed in principle the advisory information prepared for an education campaign on prevention of marine casualties caused by cargoes. The Committee also examined draft guidelines on the inspection of ships covered under SOLAS Chapter I Regulation 4 for assisting flag States in acting to ensure the safety of ships flying its flag.

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

- assessment of performance of member

Authorities;

- development of instructions and guidance on use of multifunctional body cameras during PSC inspection;
- review of achievements and status of the action plan developed based on the strategic plan;
- approval of periodical revision/update of the PSC Manual;
- endorsement of course of action for provision of technical co-operation under MEPSEAS Project (IMO-NORAD Project on Marine Environment Protection of the Southeast Asian Seas);
- consideration of inspection of fishing vessels; and
- awarding the winner of the deficiency photo of the year.

Based on the revised scheme for forum with the industry adopted by the Committee previously, a further open forum was conducted in conjunction with the Committee meeting in Marshall Islands. Representatives from IACS and INTERTANKO attended the forum. In relation with the forum, the Committee considered and approved the responses/answers to the issues raised by the industry organizations from previous forums. The Committee also considered information and points/issues provided by industry organizations of ACS, IACS, INTERTANKO, ICS, INTERCARGO and ASA.

The thirty-first meeting of the Port State Control Committee will be held in Republic of Korea in December 2020.

TECHICAL WORKING GROUP (TWG)

The thirteenth meeting of the Technical Working Group (TWG) was held in Majuro, Marshall Islands, from 10 to 11 October 2019, prior to the thirtieth meeting of the Port State Control Committee. The TWG13 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 CIC (IG-CIC), intersessional group on BWM (IG-BWM), intersessional group on distance learning programmes (IG-DLP) and intersessional group on database for fishing vessels (IG-DFV);
- cases considered by the detention review panel;
- periodical revision of the PSC Manual;
- development and review of PSC guidelines;
- preparation and arrangements for on-going and 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;
- information exchange with other regional PSC databases; 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 (<http://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 Tokyo MOU PSC data is also provided to GISIS and EQUASIS.

TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS

The ninth general training course for PSC officers was held in Yokohama, Japan, from 19 August to 13 September 2019. This was the fifteenth training course jointly organized by IMO and the Tokyo MOU. A total of 22 PSC officers participated in the training course. Fourteen of them were from the Tokyo MOU Authorities of Chile, Fiji, Indonesia, Macao



Training course for PSC officers

(China), Malaysia, New Zealand, Panama, Papua New Guinea, Peru, Philippines, Russian Federation, Thailand, Vanuatu and Viet Nam. Seven of them were invited by IMO, one each from the Abuja MOU, the Black Sea MOU, the Caribbean MOU, the Indian Ocean MOU, the Mediterranean MOU, the Riyadh MOU and the Viña del Mar Agreement. One more participant was sent by the Indian Ocean MOU on its own expenses. As in previous years, the Ministry of Land, Infrastructure, Transport and Tourism of Japan kindly provided many experts as lecturers of the



Onboard training

course and venues for on board trainings. The course was conducted with the assistance of the Shipbuilding Research Centre of Japan (SRC).

Prior to attending the course, participants were requested to try several test modules of the distance learning programme developed by IG-DLP for giving their feedbacks to assist the further development of DLP. The general training course consisted of two-week classroom lectures in a wide range of subjects, the main part of which are related to IMO and ILO instruments relevant to PSC implementation, supplemented by onboard training in the following two weeks. Experts



Onboard training

from the Ministry of Land, Infrastructure, Transport and Tourism of Japan (MLIT), SRC and the Secretariat delivered lectures on relevant subjects. Onboard training was carried out in the following two weeks, during which participants received practical training on PSC inspections at ports allocated to ten District Transport Bureaus, namely: Hokkaido, Tohoku, Kanto, Hokuriku-Shin-etsu, Chubu, Kinki, Kobe, Chugoku, Shikoku and Kyushu. In addition, a technical visit to a liferaft service station was also arranged.

The twenty-seventh seminar for PSC officers was held in Port Vila, Vanuatu, from 1 to 4 July 2019. The seminar was hosted by the Office of Maritime Regulator of Vanuatu. Participants from Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, the Republic of Korea, Macao (China), Malaysia, Marshall Islands, New Zealand, Panama, Papua New Guinea, Philippines, Russian Federation, Singapore, Thailand, Tonga and Vanuatu attended the seminar. The major topics of the seminar were the Concentrated Inspection Campaign (CIC) on Emergency Systems and Procedures 2019, results of CIC on MARPOL Annex VI 2018, Introduction of guidelines on IGF Code, Improvement of CIC inspections, Introduction of revision of PSC guidelines for control of



The twenty-seventh seminar for PSC officers

operational requirements and PSC Activities in Vanuatu. Experts from Australia, Republic of Korea, New Zealand, Vanuatu and the Secretariat provided comprehensive and informative presentations on the relevant topics. Two case study sessions were carried out to discuss actual cases provided by Authorities or reviewed by the detention review panel.



The eighth specialized training course

The eighth specialized training course was convened in Vladivostok, Russian Federation, from 24 to 26 September 2019. The training focused on STCW Convention. Training was hosted by the Federal State Budgetary Institution (FSBI) "The Administration of the Maritime Ports of Primorsky region and Eastern Arctic". Participants from Chile, Fiji, Indonesia, Japan, Republic of Korea, Macao (China), Malaysia, Papua New Guinea, Philippines, Russian Federation, Thailand, Vanuatu and Viet Nam attended the course. In addition, two PSC officers from the Indian Ocean MOU region, one was from Mozambique and the other from Seychelles, participated in the course. Experts from APEC SEN Task Force Team/Korea Institute of Maritime and Fisheries Technology (KIMFT), Finnish Transport and Communication Agency, Russian Federation and the Tokyo MOU

Secretariat delivered presentations at the training course.

Three expert missions were organized in 2019. The first mission was delivered in Port Kelang, Malaysia, from 8 to 12 April 2019 by experts from Republic of Korea. The second mission was carried out in Suva, Fiji, from 25 to 29 November 2019 by experts from Japan. The third mission was conducted in Vung Tau, Viet Nam, from 9 to 13 December 2019 by experts from Japan.

Seven PSC officer exchanges, involving eight PSC officers, were completed in 2019, namely two PSC officers one each from Australia and Russian Federation to China, one PSC officer from Republic of Korea to Canada, one PSC officer from Singapore to Chile, one PSC officer from Canada to Russian Federation, one PSC officer from Russian Federation to Hong Kong (China), one PSC officer from Chile to Thailand and one PSC officer from Australia to Singapore.

Effective and successful implementation of the extensive, comprehensive technical co-operation programmes ensures Tokyo MOU to keep good potential and sustainability for development of its activities. The Nippon Foundation kindly provided continuous funding for the Tokyo MOU technical co-operation activities.



Flag Performance Improvement Seminar

As informed in the previous Annual Report, a project for improvement of flag State performance, funded by the Nippon Foundation, had been initiated by Tokyo MOU. Under the project, a first Seminar for Flag Performance Improvement was successfully held in Brisbane, Australia, from 11 to 15 February 2019. Officials involved in flag Administrations policy of Cook Islands, Fiji, Indonesia, Niue and Papua New Guinea attended the Seminar. AMSA provided full support to the Seminar, including provision of the venue and superior lecturers. Experts from the Authorities of Thailand and Viet Nam, and the Nippon Kaiji Kyokai (Class NK) also kindly gave lectures at the Seminar.



Workshop on PSC for ASEAN member states

Moreover, a workshop on PSC for member states of the Association of Southeast Asian Nations (ASEAN) in Manila, Philippines, from 25 February to 1 March 2019 was coordinated by the Tokyo MOU Secretariat and hosted by the Philippine Coast Guard. The workshop was sponsored by the Australian Department of Foreign Affairs and Trade (DFAT) and AMSA. The Authorities of Australia, Japan and New Zealand provided instructors to the workshop. The ASEAN member States of Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam participated in the workshop.

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 the 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) and Implementation of IMO Instruments (III) Sub-Committees since 2006. The Tokyo MOU Secretariat attended the sixth meeting of the III Sub-Committee in July 2019.

In support of inter-regional collaboration on port State control, 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. In a similar manner, the Tokyo MOU has granted observer status to the Paris MoU, the Indian Ocean MOU, the Viña del Mar Agreement, the Black Sea MOU, the Riyadh MOU, the Caribbean MOU and the Abuja MOU.

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 the period of 2019, continuous efforts and further coordinated actions by the two Memoranda were made on the following:

- continuous review of actions emanating from the 3rd Joint Ministerial Declaration;
- ongoing co-operation for keeping harmonization of PSC guidelines with each other;
- closer liaison and co-operation for planning, preparation and training of joint CICs;
- amendments to the policy on joint CICs;
- coordination for ensuring compliance with the global sulphur cap requirements on marine fuel oil, from 1 January 2020;
- continuous submission to IMO on annual list of flags targeted by the Paris MoU, Tokyo MOU and the United States Coast Guard; and
- sharing information on development of new flag and RO performance calculation method.

PORT STATE CONTROL UNDER THE TOKYO MOU, 2019

INSPECTIONS

In 2019, 31,372 inspections, involving 17,647 individual ships, were carried out on ships registered under 97 flags. Figure 3 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. Out of 31,372 inspections, there were 18,461 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 25,741*, the inspection rate in the region was approximately 69%** in 2019 (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.



Winner of Deficiency Photo of the Year - 2019

* 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

Inspection results regarding recognized organizations are shown in Table 6.

DETENTIONS

Ships are 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, or without presenting an unreasonable threat of harm to the marine environment.

In 2019, 983 ships registered under 66 flags were detained due to serious deficiencies hav-



Candidate photo for Deficiency Photo of the Year

ing been found onboard. The detention rate of ships inspected was 3.13%. Both the number of detentions and detention percentage has decreased continuously till the previous year; however, a bounce of the trend was found in 2019.

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, among which detainable deficiencies on Lifeboats (Life saving appliances) was the highest.

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 2017-2019 consists of 69 flags. The number of flags in the black list is 10, two flags less than the last year. The number of flags on the grey list increased from 16 to 19 during the reporting period. The white list includes 40 flags, same as the last 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 94 vessels, involving 23 individual ships, were identified as under-performing ships in 2019. Both the total number of vessels published and the number individual ships involved are increased notably, comparing with the previous year. The list of under-performing ships is provided in Table 16.

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 73,393 deficiencies were recorded in 2019. The deficiencies found are categorized and shown in Figure 7 and Table 7.

It has been noted that fire safety measures, life-saving appliances and safety of navigation continue to be the top three categories of deficiencies discovered on ships. In 2019, 13,178 deficiencies related to fire safety measures, 9,893 deficiencies related to life-saving



Candidate photo for Deficiency Photo of the Year

appliances and 9,179 safety of navigation related deficiencies were recorded, representing nearly 45% of the total number of all recorded deficiencies.

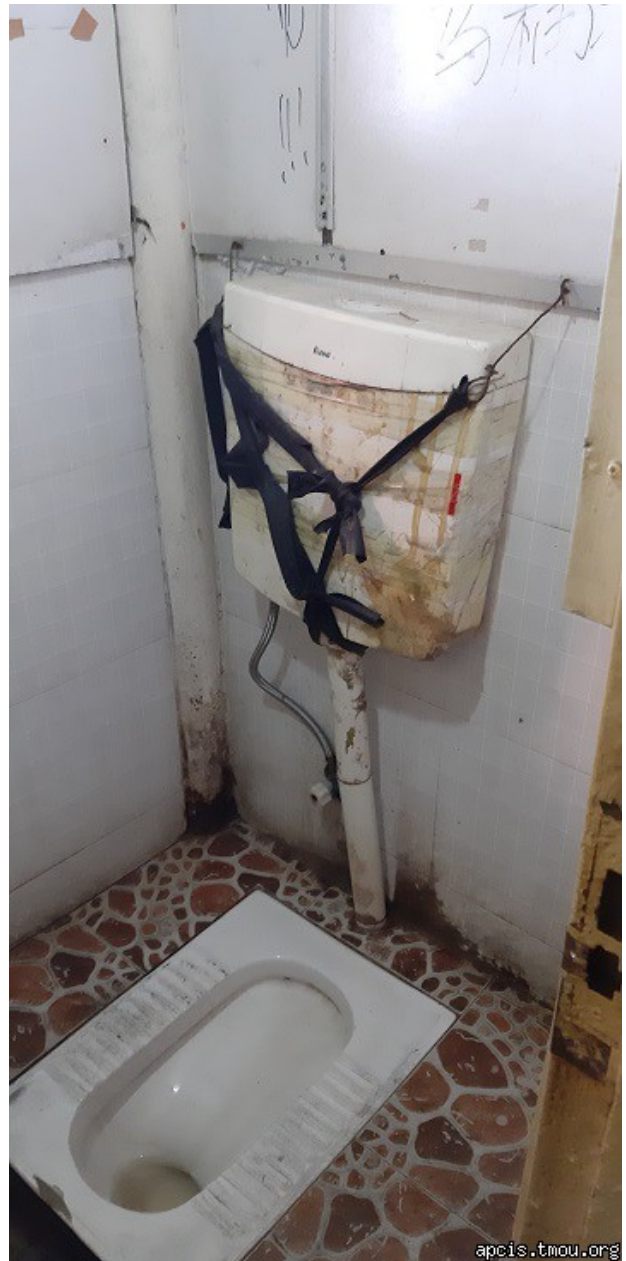
Comparing the data with the last year, deficiencies under the category of certificates and documentation reduced by 1,181 in number or 18% by percentage. MARPOL Annex VI related deficiencies dropped about 40% in 2019, after the 2018 CIC. A general reduction trend is also found in categories of radio Communications, cargo operations including equipment, safety of navigation, dangerous goods and ISM. There was a continuous increase of deficiencies relating to BWM, after two years of implementation of the convention. As a direct result of the CIC on Emergency Systems and Procedures in 2019, deficiencies on emergency systems increased 1,029 in number or 25% by percentage.

DEFICIENCY PHOTO OF THE YEAR

The function for collecting and storing deficiency photos taken during PSC inspections in the APCIS system 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.



Candidate photo for Deficiency Photo of the Year



Candidate photo for Deficiency Photo of the Year

Deficiency photo of the years are also published on the Tokyo MOU website.

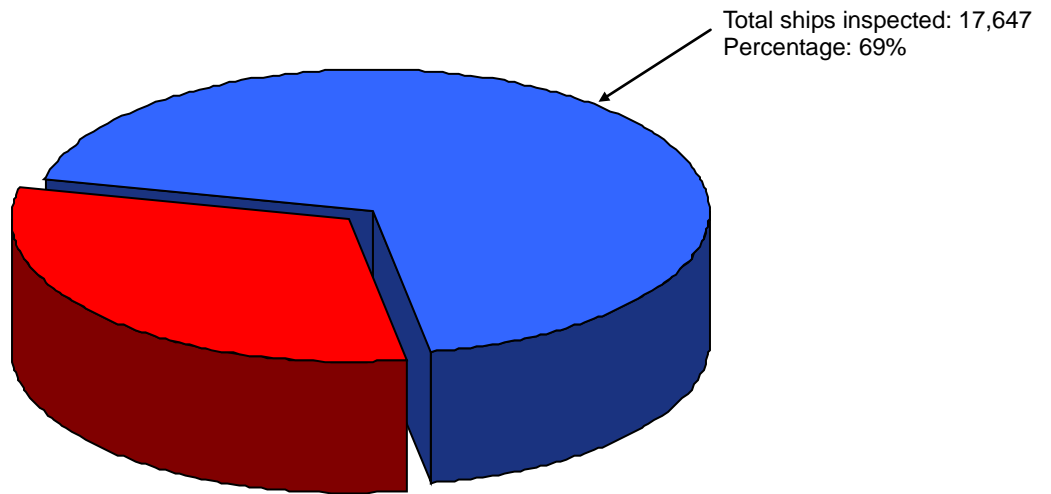
In 2019, a total of 10,459 photos were submitted by PSC officers. In accordance with the procedures for selection of deficiency photo of the year, the photo taken by PSC officer of the Authority of Japan was selected as the winner for 2019. Deficiency photo of the year – 2019 and other candidate photos are provided in

this section.

**OVERVIEW OF PORT STATE CONTROL
RESULTS 2009 – 2019**

Figures 9-14 show the comparison of port State inspection results for 2009 - 2019. 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: 25,741

Figure 2: INSPECTION PER SHIP RISK PROFILE

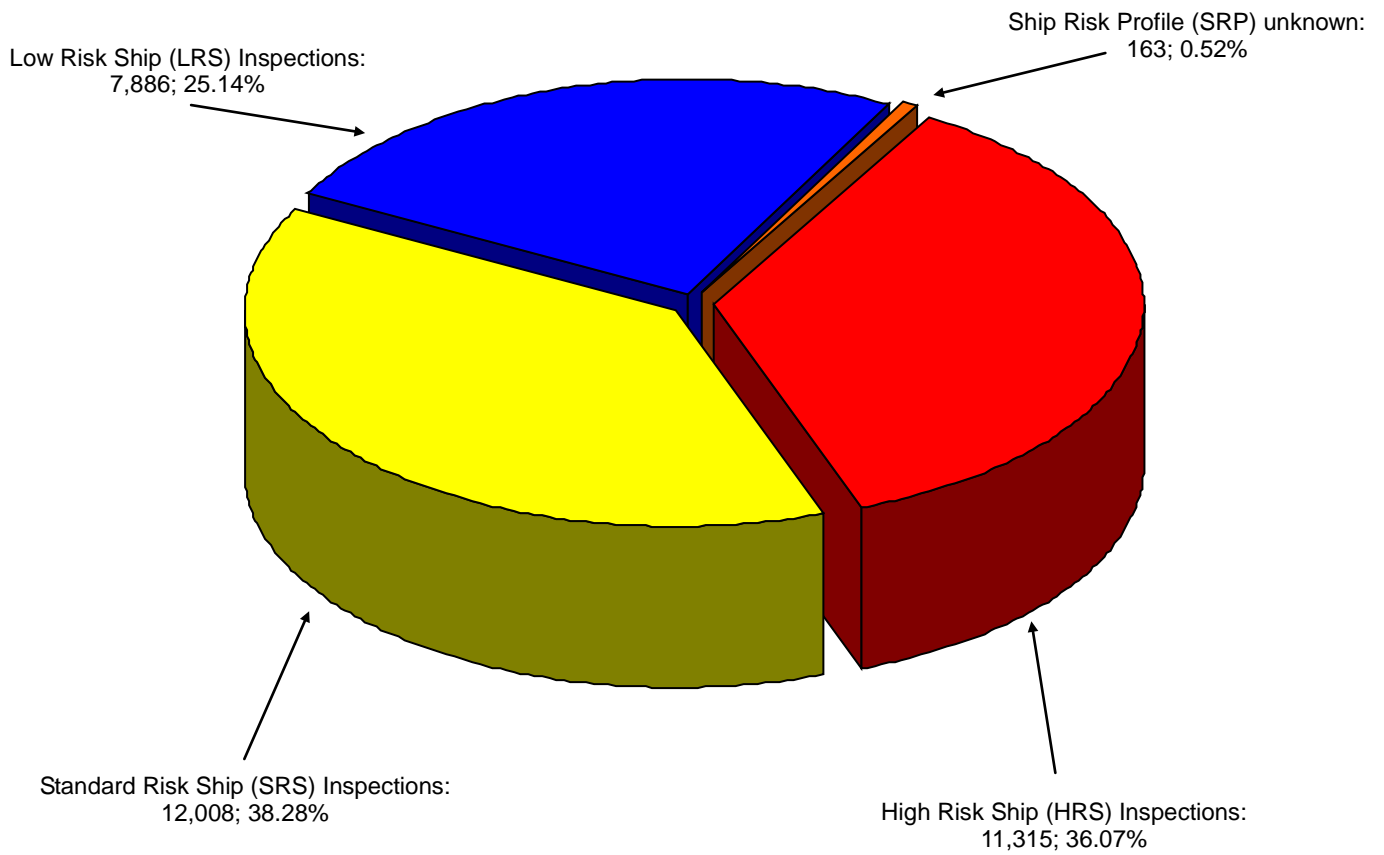


Figure 3: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES

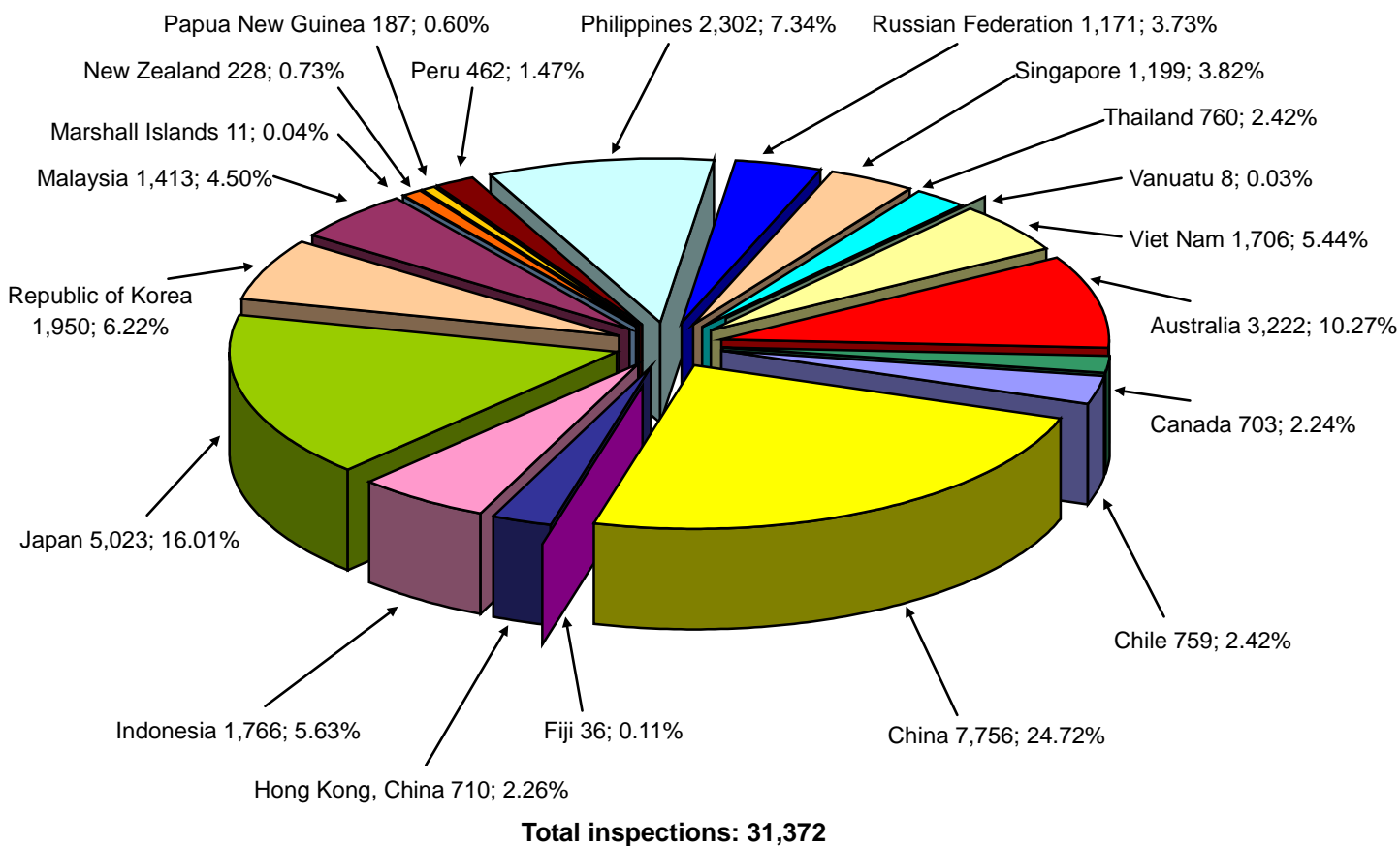


Figure 4: TYPE OF SHIP INSPECTED

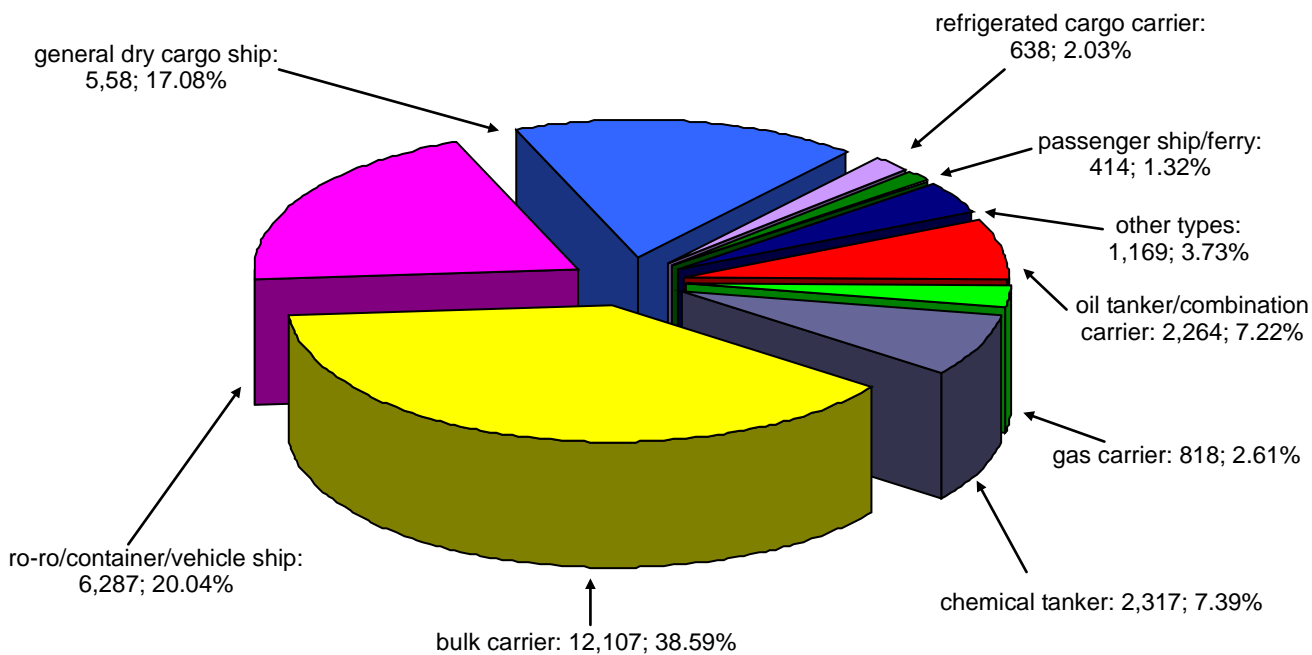
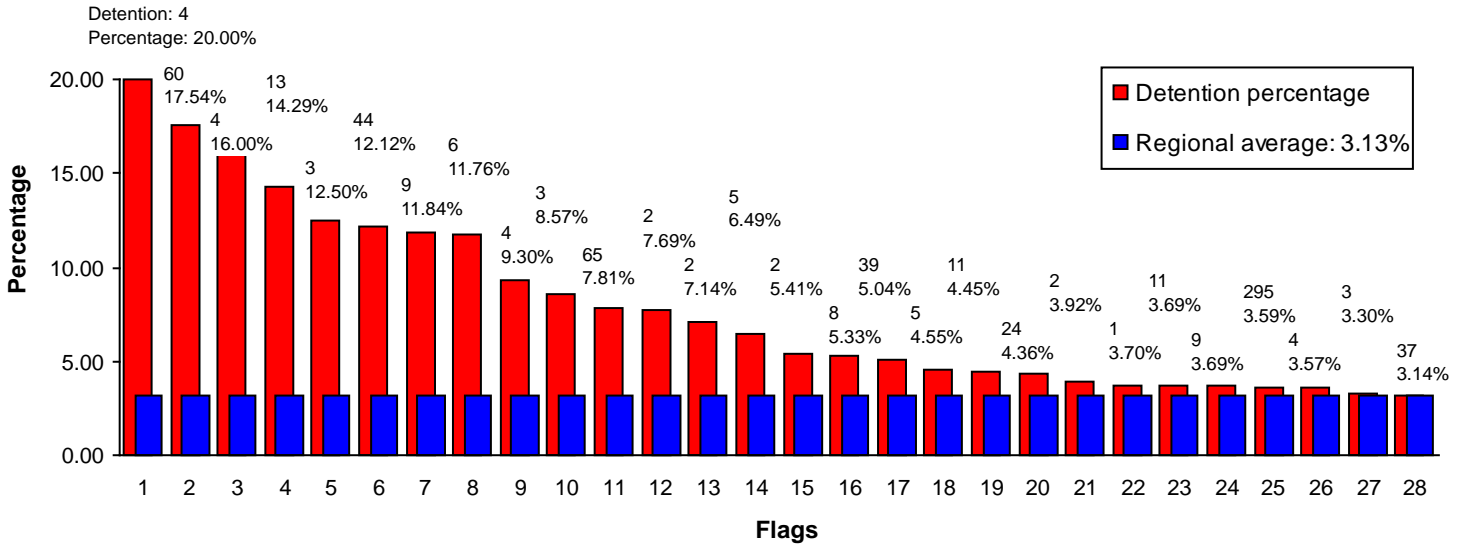


Figure 5: DETENTIONS PER FLAG



Flags:

- | | | | |
|-------------------------------------|-------------------------|-------------------------|------------------------------|
| 1. Croatia | 2. Togo | 3. Niue | 4. Mongolia |
| 5. Jamaica | 6. Sierra Leone | 7. Palau | 8. Korea, Dem. People's Rep. |
| 9. Saint Vincent and the Grenadines | 10. Kiribati | 11. Belize | 12. Barbados |
| 13. Cook Islands | 14. India | 15. Turkey | 16. United Kingdom (UK) |
| 17. Viet Nam | 18. Italy | 19. Antigua and Barbuda | 20. Cyprus |
| 21. Saudi Arabia | 22. Dominica | 23. Indonesia | 24. Thailand |
| 25. Panama | 26. Cayman Islands (UK) | 27. Bangladesh | 28. Malta |

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

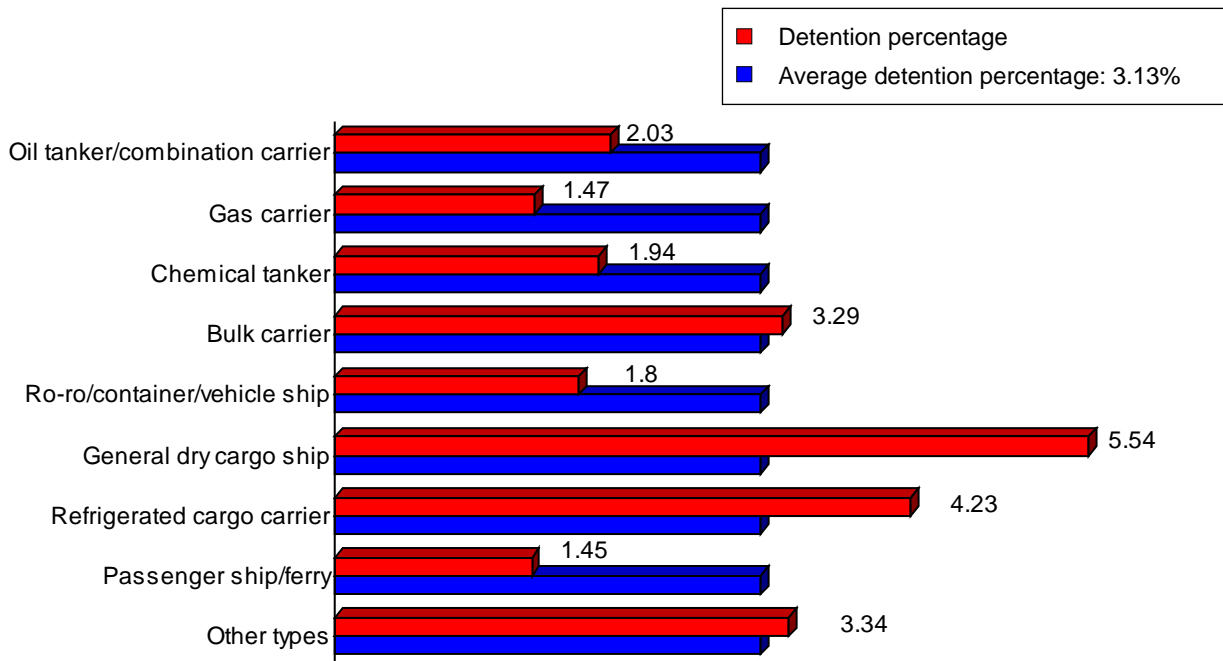


Figure 7: DEFICIENCIES BY MAIN CATEGORIES

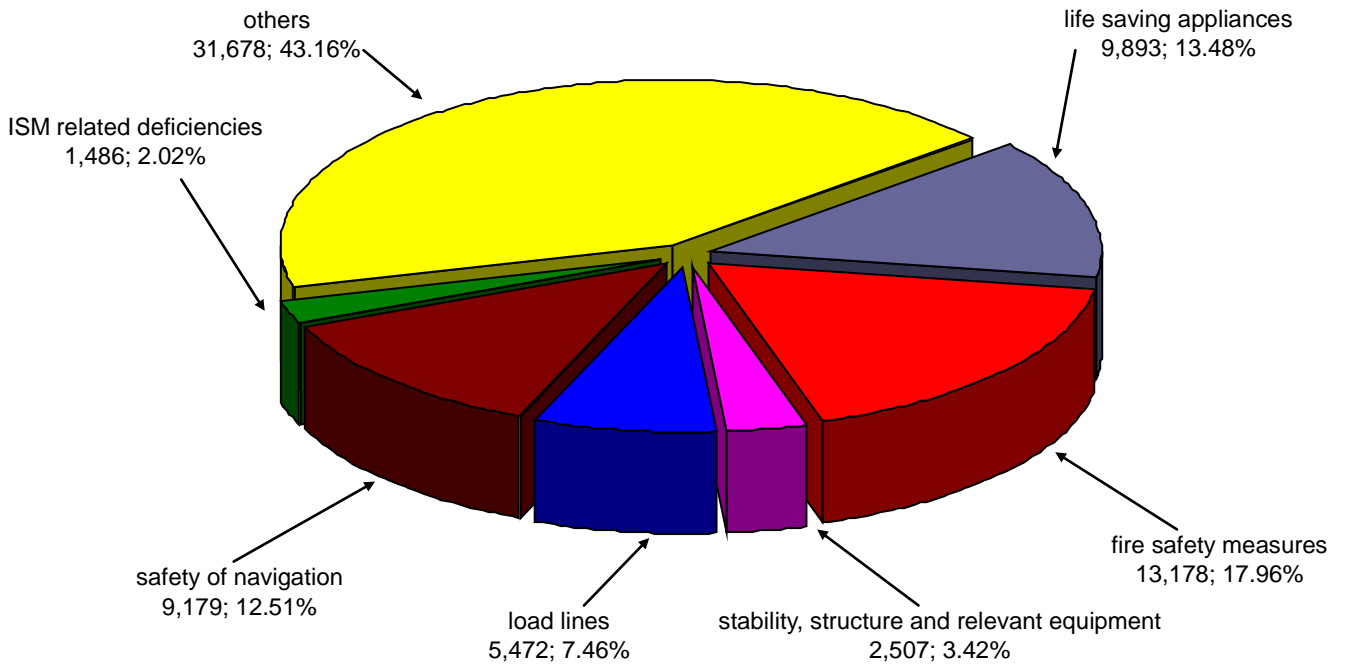
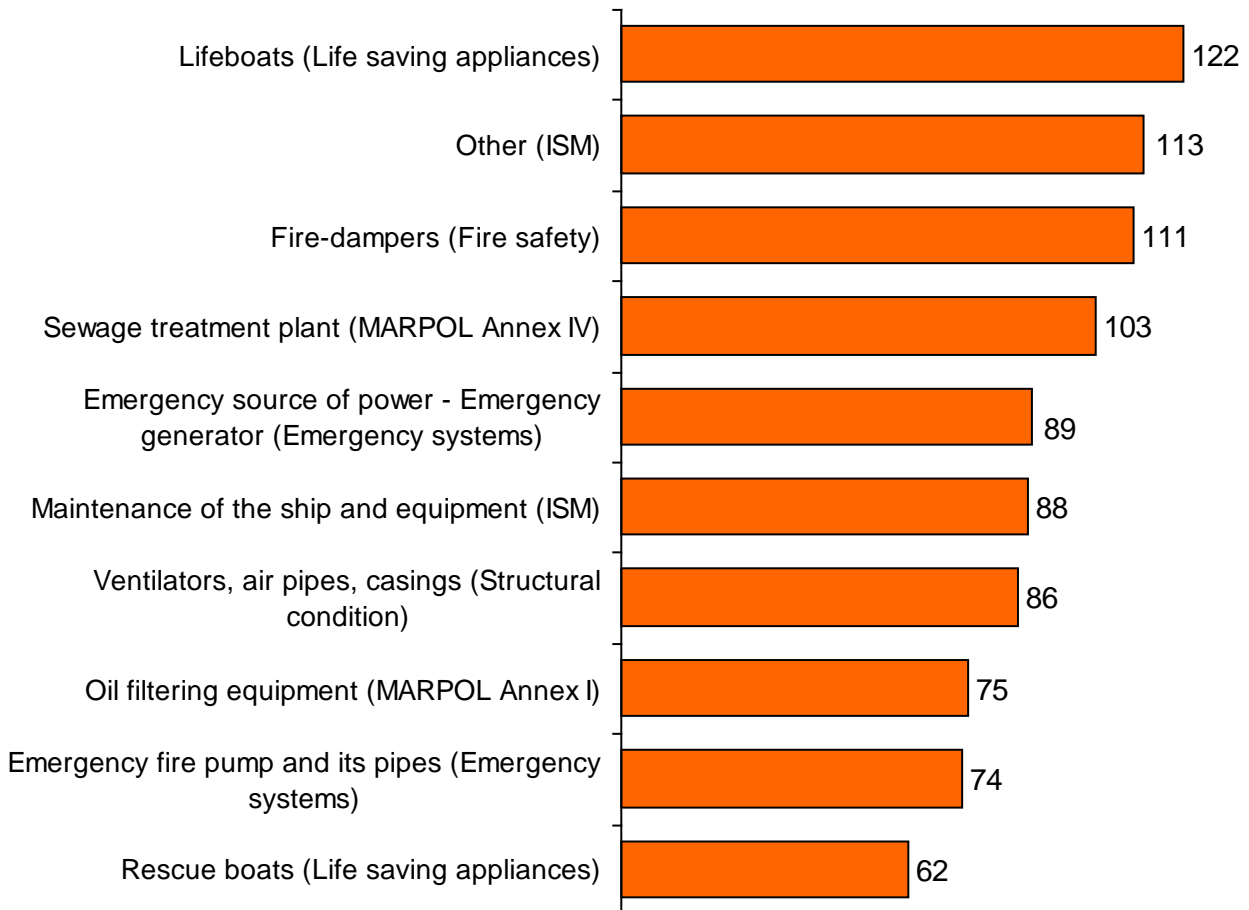


Figure 8: MOST FREQUENT DETAINABLE DEFICIENCIES



OVERVIEW OF PORT STATE CONTROL RESULTS 2009 - 2019

Figure 9: NO. OF INSPECTIONS

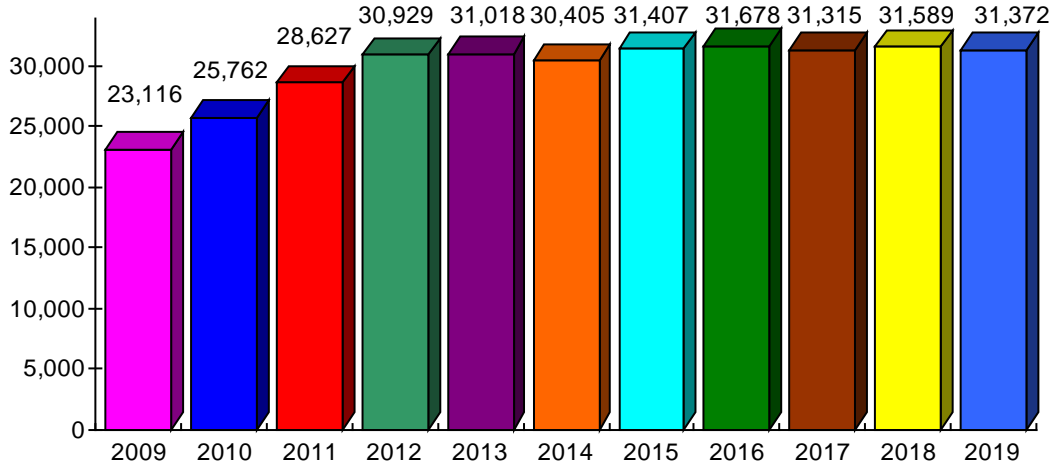


Figure 10: INSPECTION PERCENTAGE

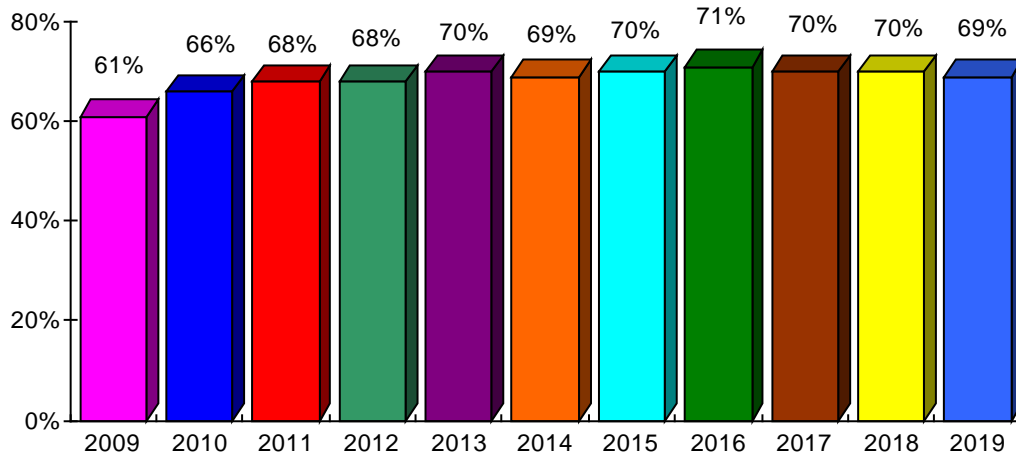


Figure 11: NO. OF INSPECTIONS WITH DEFICIENCIES

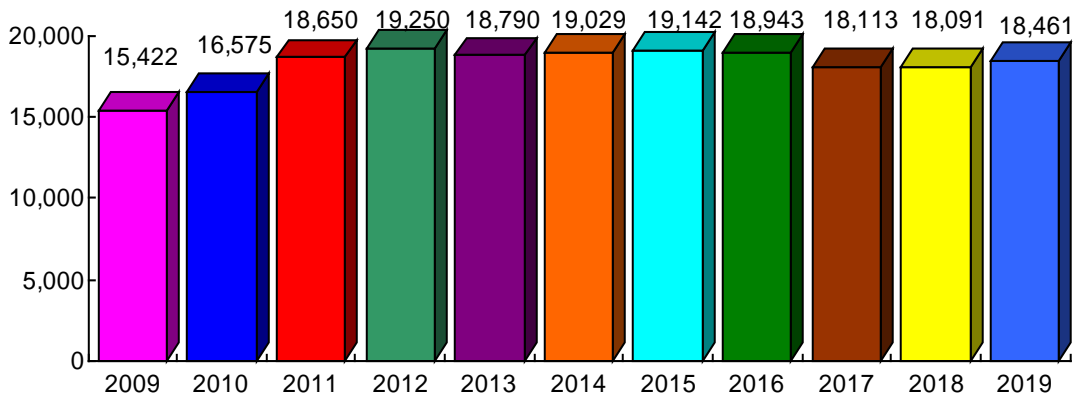


Figure 12: NO. OF DEFICIENCIES

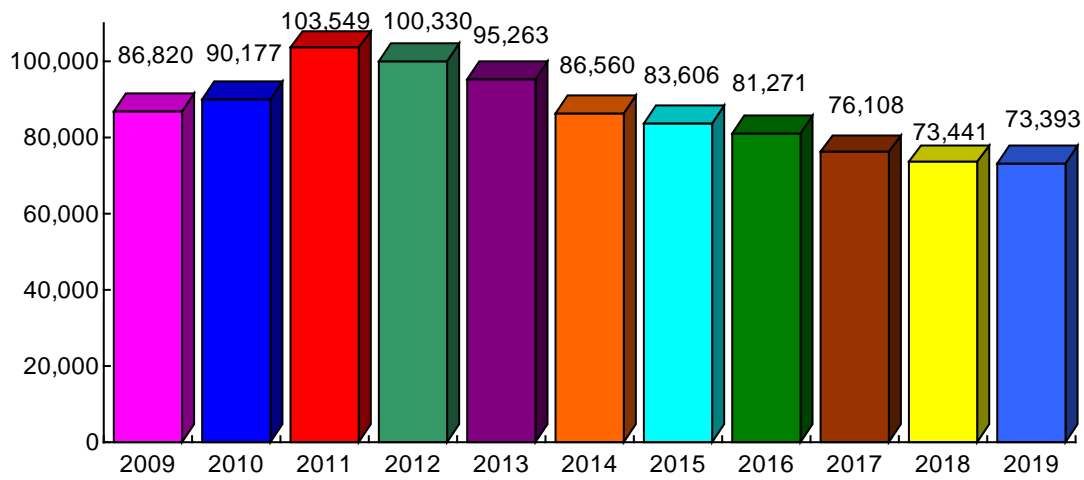


Figure 13: NO. OF DETENTIONS

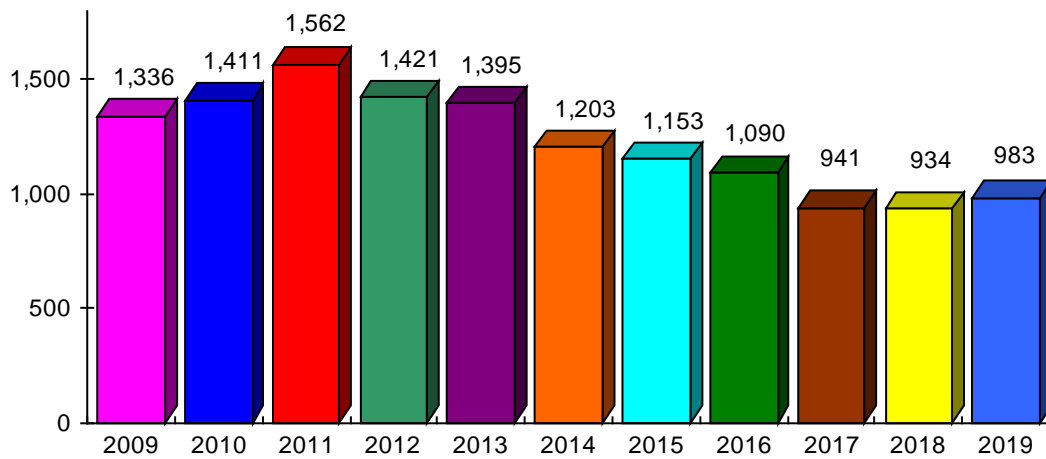
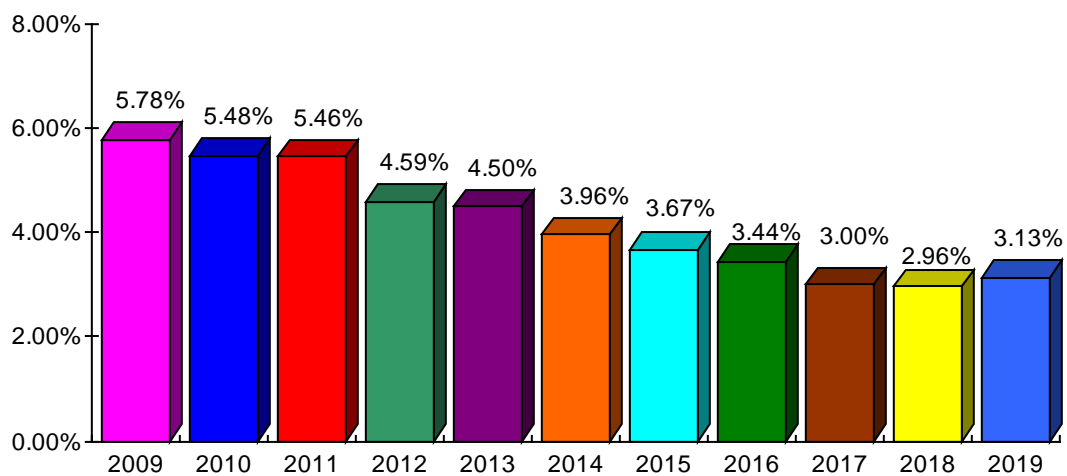


Figure 14: DETENTION PERCENTAGE



ANNEX 1

STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(as at 31 December 2019)

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	14/11/81	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
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 at 31 December 2019)

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	-
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
DPR Korea	01/05/85	18/10/89	-	-	-	-	-
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 at 31 December 2019)

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	-
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	-	-	15/07/98	-
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 2019

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⁾	2,823	4,889	3,222	1,667	1,490	5,277	163	6,055	46.62	5.06
Canada ⁴⁾	692	705	703	2	407	2,041	12	2,006	34.50	1.71
Chile	719	1,129	759	370	297	650	7	1,862	38.61	0.92
China	6,233	10,943	7,756	3,187	6,673	27,910	434	16,608	37.53	5.60
Fiji	28	58	36	22	4	17	1	208	13.46	2.78
Hong Kong, China	705	939	710	229	560	2,507	20	5,402	13.05	2.82
Indonesia	1,464	2,028	1,766	262	726	2,702	73	7,702	19.01	4.13
Japan	3,341	6,472	5,023	1,449	2,851	11,549	93	7,420	45.03	1.85
Republic of Korea	1,671	2,994	1,950	1,044	1,298	4,704	59	10,091	16.56	3.03
Malaysia	1,164	1,709	1,413	296	536	1,942	11	7,099	16.40	0.78
Marshall Islands	11	17	11	6	9	96	2	89	12.36	18.18
New Zealand	196	307	228	79	94	324	6	1,041	18.83	2.63
Panama ⁵⁾	0	0	0	0	0	0	0	3,316	0	0
Papua New Guinea	152	316	187	129	113	591	3	480	31.67	1.60
Peru	442	503	462	41	105	250	1	1,842	24.00	0.22
Philippines	1,831	2,971	2,302	669	485	1,142	7	3,379	54.19	0.30
Russian Federation ⁴⁾	841	2,428	1,171	1,257	972	4,811	65	2,756	30.52	5.55
Singapore	1,106	1,432	1,199	233	860	4,382	21	14,253	7.76	1.75
Thailand	496	854	760	94	74	181	0	3,871	12.81	0
Vanuatu	8	8	8	0	0	0	0	55	14.55	0
Viet Nam	1,420	2,122	1,706	416	907	2,317	5	4,328	32.81	0.29
Total	17,647	42,824	31,372	11,452	18,461	73,393	983	Regional 25,741	Regional 69%	Regional 3.13%

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

2) LLI data for 2019.

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

4) Data is only for the Pacific ports.

5) Data for Panama in 2019 is not provided to Tokyo MOU.

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	3,222	4	4	0	0
Canada	703	11	11	0	0
Chile	759	5	5	0	0
China	7,756	310	324	9	0.12
Fiji	36	1	1	0	0
Hong Kong, China	710	95	95	0	0
Indonesia	1,766	24	25	0	0
Japan	5,023	217	232	0	0
Republic of Korea	1,950	109	118	1	0.05
Malaysia	1,413	48	49	1	0.07
Marshall Islands	11	3	4	0	0
New Zealand	228	1	1	0	0
Panama	0	0	0	0	0
Papua New Guinea	187	3	3	0	0
Peru	462	11	11	0	0
Philippines	2,302	70	88	0	0
Russian Federation	1,171	66	79	1	0.09
Singapore	1,199	57	59	0	0
Thailand	760	3	3	0	0
Vanuatu	8	0	0	0	0
Viet Nam	1,706	45	45	0	0
Total	31,372	1,083	1,157	12	Regional 0.04%

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 3: PORT STATE INSPECTIONS PER SHIP RISK PROFILE

Authority	Ship Risk Profile (SRP)				Total No. of inspections
	HRS	SRS	LRS	SRP Unknown	
Australia	548	1,286	1,361	27	3,222
Canada	127	279	291	6	703
Chile	112	394	252	1	759
China	3,108	2,884	1,686	78	7,756
Fiji	11	11	14	0	36
Hong Kong, China	261	289	160	0	710
Indonesia	540	702	524	0	1,766
Japan	2,160	1,883	966	14	5,023
Republic of Korea	842	680	404	24	1,950
Malaysia	464	538	400	11	1,413
Marshall Islands	4	6	1	0	11
New Zealand	79	103	46	0	228
Panama	0	0	0	0	0
Papua New Guinea	79	76	32	0	187
Peru	74	223	164	1	462
Philippines	671	910	721	0	2,302
Russian Federation	719	299	152	1	1,171
Singapore	474	579	146	0	1,199
Thailand	216	259	285	0	760
Vanuatu	1	2	5	0	8
Viet Nam	825	605	276	0	1,706
Total	11,315	12,008	7,886	163	31,372

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	3	3	28	2	66.67
Antigua and Barbuda	247	149	534	11	4.45
Australia	9	2	7	0	0
Bahamas	727	317	976	11	1.51
Bahrain	1	1	4	0	0
Bangladesh	91	84	393	3	3.30
Barbados	26	16	79	2	7.69
Belgium	46	25	60	0	0
Belize	832	788	4,579	65	7.81
Bermuda (UK)	59	28	81	0	0
Brazil	10	9	38	0	0
Brunei Darussalam	5	1	3	0	0
Cambodia	1	1	8	1	100.00
Cameroon	1	1	32	1	100.00
Cayman Islands (UK)	112	44	135	4	3.57
Chile	9	3	7	0	0
China	646	318	1,194	3	0.46
Colombia	1	1	7	0	0
Comoros	19	17	73	1	5.26
Cook Islands	28	17	170	2	7.14
Croatia	20	16	104	4	20.00
Curacao	13	5	16	0	0
Cyprus	551	332	1,175	24	4.36
Denmark	169	72	196	2	1.18
Dominica	27	21	172	1	3.70
Ecuador	3	3	19	2	66.67
Egypt	2	2	13	0	0
Ethiopia	4	4	40	0	0
Falkland Islands (UK) (Malvinas)	3	1	1	0	0
Fiji	4	3	15	1	25.00
France	53	36	89	0	0
Gabon	2	2	6	0	0
Germany	89	55	165	1	1.12
Gibraltar (UK)	19	10	30	0	0
Greece	309	161	504	9	2.91
Hong Kong, China	3,141	1,474	4,746	22	0.70
India	77	57	258	5	6.49
Indonesia	298	253	1,291	11	3.69

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Iran	42	39	161	1	2.38
Isle of Man (UK)	211	101	275	6	2.84
Israel	5	5	31	0	0
Italy	110	68	273	5	4.55
Jamaica	24	21	110	3	12.50
Japan	212	106	349	4	1.89
Kiribati	35	31	200	3	8.57
Korea, Democratic People's Republic	51	51	411	6	11.76
Korea, Republic of	1,270	885	2,954	5	0.39
Kuwait	16	11	43	1	6.25
Liberia	3,146	1,810	6,443	94	2.99
Libya	3	1	2	0	0
Lithuania	1	1	4	0	0
Luxembourg	37	21	88	1	2.70
Malaysia	205	124	667	4	1.95
Maldives	3	3	19	0	0
Malta	1,180	652	2,141	37	3.14
Marshall Islands	2,995	1,486	5,113	68	2.27
Mauritius	3	3	17	0	0
Mexico	1	0	0	0	0
Moldova	2	2	6	0	0
Mongolia	91	80	584	13	14.29
Montenegro	4	2	15	1	25.00
Myanmar	8	3	42	1	12.50
Nauru	3	2	7	0	0
Netherlands	104	59	171	2	1.92
New Zealand	3	2	6	0	0
Niue	25	23	154	4	16.00
Norway	271	134	425	5	1.85
Pakistan	13	8	72	1	7.69
Palau	76	67	499	9	11.84
Panama	8,212	4,938	19,852	295	3.59
Peru	1	1	1	0	0
Philippines	170	94	433	5	2.94
Portugal	294	164	541	7	2.38
Qatar	13	9	40	1	7.69
Russian Federation	313	281	1,254	8	2.56
Saint Kitts and Nevis	3	1	2	0	0
Saint Vincent and the Grenadines	43	41	169	4	9.30
Saudi Arabia	51	23	78	2	3.92

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Sierra Leone	363	353	2,520	44	12.12
Singapore	2,131	961	3,045	24	1.13
South Africa	2	2	6	1	50.00
Spain	14	10	26	0	0
Sri Lanka	12	11	38	1	8.33
Sweden	13	5	9	0	0
Switzerland	18	7	16	0	0
Taiwan, China	119	36	112	2	1.68
Tanzania	2	2	8	0	0
Thailand	244	171	642	9	3.69
Togo	342	329	2,406	60	17.54
Turkey	37	20	76	2	5.41
Tuvalu	131	82	328	4	3.05
Ukraine	6	6	19	1	16.67
United Arab Emirates (UAE)	1	1	5	0	0
United Kingdom (UK)	150	82	325	8	5.33
United States of America	49	25	40	1	2.04
Vanuatu	55	30	109	1	1.82
Viet Nam	774	641	2,729	39	5.04
Ship's registration withdrawn	2	2	34	2	100.00
Total	31,372	18,461	73,393	983	Regional 3.13

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	60	30	102	2	3.33
Combination carrier	37	13	66	1	2.70
Oil tanker	2,167	1,065	4,114	43	1.98
Gas carrier	818	371	1,130	12	1.47
Chemical tanker	2,317	1,097	3,542	45	1.94
Bulk carrier	12,107	7,101	26,307	398	3.29
Vehicle carrier	717	234	607	8	1.12
Container ship	5,481	2,935	10,365	98	1.79
Ro-Ro cargo ship	89	71	380	7	7.87
General cargo/multi-purpose ship	5,358	4,025	20,096	297	5.54
Refrigerated cargo carrier	638	461	2,323	27	4.23
Woodchip carrier	250	132	472	3	1.20
Livestock carrier	70	37	139	2	2.86
Ro-Ro passenger ship	100	92	267	1	1.00
Passenger ship	314	203	710	5	1.59
Factory ship	5	5	16	0	0
Heavy load carrier	120	73	269	4	3.33
Offshore service vessel	98	71	354	2	2.04
MODU & FPSO	6	2	6	0	0
High speed passenger craft	49	43	203	0	0
Special purpose ship	78	38	157	2	2.56
High speed cargo craft	2	2	11	0	0
Tugboat	204	142	593	6	2.94
Others	287	218	1,164	20	6.97
Total	31,372	18,461	73,393	983	3.13

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	2	0	0	0	0	0
American Bureau of Shipping	4,070	73	2	1.79	0.05	2.74
Asia Classification Society	26	3	2	11.54	7.69	66.67
Asia Shipping Certification Services	2	1	0	50.00	0	0
Biro Klasifikasi Indonesia	157	7	0	4.46	0	0
Bulgarski Koraben Registar	3	0	0	0	0	0
Bureau Veritas	4,175	137	2	3.28	0.05	1.46
China Classification Society	2,596	24	0	0.92	0	0
Columbus American Register	1	1	0	100.00	0	0
Cosmos Marine Bureau	101	15	4	14.85	3.96	26.67
CR Classification Society	219	4	0	1.83	0	0
Croatian Register of Shipping	33	4	0	12.12	0	0
Cyprus Bureau of Shipping	6	0	0	0	0	0
DNV GL AS	7,607	180	6	2.37	0.08	3.33
Dromon Bureau of Shipping	81	8	1	9.88	1.23	12.50
Foresight Ship Classification	19	3	1	15.79	5.26	33.33
Hellenic Register of Shipping	6	0	0	0	0	0
Indian Register of Shipping	79	6	0	7.59	0	0
Intermaritime Certification Services, S.A.	896	58	4	6.47	0.45	6.90
International Marine Survey Association	1	0	0	0	0	0
International Maritime Register	8	0	0	0	0	0
International Naval Surveys Bureau	28	2	0	7.14	0	0
International Register of Shipping	133	20	2	15.04	1.50	10.00
International Ship Classification	96	7	3	7.29	3.13	42.86
Iranian Classification Society	34	2	0	5.88	0	0
Isthmus Bureau of Shipping	451	28	2	6.21	0.44	7.14
Korea Classification Society (former Joson Classification Society)	103	6	0	5.83	0	0
Korea Ship Safety Technology Authority	16	0	0	0	0	0
Korean Register of Shipping	3,024	48	1	1.59	0.03	2.08
Limdal Marine Services	1	0	0	0	0	0
Lloyd's Register	4,836	102	7	2.11	0.14	6.86
Macosnar Corporation	59	5	0	8.47	0	0
Maritime Bureau of Shipping	3	0	0	0	0	0
Maritime Technical Systems and Services	3	1	0	33.33	0	0
Mediterranean Shipping Register	1	0	0	0	0	0
National Shipping Adjusters Inc	22	5	1	22.73	4.55	20.00
New United International Marine Services Ltd	63	5	0	7.94	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%
Nippon Kaiji Kyokai	11,002	294	8	2.67	0.07	2.72
Novel Classification Society S.A.	1	0	0	0	0	0
Overseas Marine Certification Services	464	53	7	11.42	1.51	13.21
Panama Bureau of Shipping	11	0	0	0	0	0
Panama Maritime Documentation Services	489	41	2	8.38	0.41	4.88
Panama Shipping Registrar Inc.	50	4	0	8.00	0	0
Phoenix Register of Shipping	7	0	0	0	0	0
Polski Rejestr Statkow	71	2	0	2.82	0	0
Qualitas Register of Shipping S.A.	3	0	0	0	0	0
Registro Brasileiro de Navios de Aeronaves	2	0	0	0	0	0
RINA Services S.p.A.	1,191	46	0	3.86	0	0
RINAVE Portuguesa	1	0	0	0	0	0
Russian Maritime Register of Shipping	429	15	0	3.50	0	0
Ship Classification Malaysia	27	2	0	7.41	0	0
Shipping Register of Ukraine	6	1	0	16.67	0	0
SingClass International Pte Ltd	49	8	2	16.33	4.08	25.00
Sing-Lloyd	74	9	1	12.16	1.35	11.11
Turkish Lloyd	1	0	0	0	0	0
Union Bureau of Shipping	311	51	11	16.40	3.54	21.57
Universal Maritime Bureau	216	24	3	11.11	1.39	12.50
Universal Shipping Bureau	1	0	0	0	0	0
Veritas Register of Shipping	2	0	0	0	0	0
Vietnam Register	799	40	2	5.01	0.25	5.00
Other	76	4	0	5.26	0	0

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	1,026
	Documents	2,943
	Ship Certificates	1,594
Structural Conditions		2,507
Water/Weathertight conditions		5,472
Emergency Systems		5,157
Radio Communications		1,382
Cargo operations including equipment		645
Fire safety		13,178
Alarms		537
Safety of Navigation		9,179
Life saving appliances		9,893
Dangerous goods		151
Propulsion and auxiliary machinery		4,015
Working and Living Conditions	Living Conditions	334
	Working Conditions	1,913
Labour Conditions	Minimum requirements for seafarers	31
	Conditions of employment	444
	Accommodation, recreational facilities, food and catering	1,426
	Health protection, medical care, social security	3,023
Pollution prevention	Anti Fouling	8
	Ballast Water	1,522
	MARPOL Annex I	1,514
	MARPOL Annex II	25
	MARPOL Annex III	10
	MARPOL Annex IV	1,350
	MARPOL Annex V	1,181
MARPOL Annex VI	954	
ISM		1,486
Other		493
Total		73,393
ISPS		1,157
Grand total		74,550

SUMMARY OF PORT STATE INSPECTION DATA 2017 – 2019

Table 8: BLACK – GREY – WHITE LISTS *

Flag	Inspections 2017-2019	Detentions 2017-2019	Black to Grey Limit	Grey to White Limit	Excess Factor
BLACK LIST					
Tanzania	44	15	6		6.20
Togo	1,201	174	99		2.95
Mongolia	261	37	26		2.28
Korea, Democratic People's Republic	315	43	30		2.21
Sierra Leone	1,202	126	99		1.69
Palau	239	29	24		1.64
Niue	127	17	14		1.62
Saint Kitts and Nevis	34	6	5		1.46
Barbados	71	10	9		1.36
Micronesia, Federated States of ⁽¹⁾	70	9	9		1.03
GREY LIST					
Jamaica	82	10	10	1	1.00
Kiribati	221	22	22	9	0.98
Comoros	44	6	6	0	0.94
Belize	2,531	183	199	156	0.63
Cook Islands	92	7	11	2	0.56
Croatia	92	7	11	2	0.56
Pakistan	39	3	6	0	0.54
Qatar	41	3	6	0	0.52
Sri Lanka	46	3	7	0	0.47
Dominica	89	5	11	2	0.36
Iran	134	7	15	4	0.28
India	248	14	24	10	0.26
Curacao	35	1	5	0	0.26
Turkey	106	5	12	3	0.25
Saint Vincent and the Grenadines	167	8	18	6	0.19
Indonesia	761	45	65	41	0.16
Switzerland	80	2	10	1	0.08
Kuwait	61	1	8	0	0.07
Luxembourg	70	1	9	1	0.01

⁽¹⁾ In February 2017, a notification by the Permanent Mission of the Federated States of Micronesia (FSM) to the United Nations was received, advising that the laws of FSM do not provide or allow for an international ship registry and, therefore, ships registered under Micronesia International Ship Registry were fraudulent. In this connection, it would be possible that the inspections and detentions for Micronesia involve the above mentioned fraudulently registered ships.

Flag	Inspections 2017-2019	Detentions 2017-2019	Black to Grey Limit	Grey to White Limit	Excess Factor
WHITE LIST					
Spain	31	0		0	0
Chile	32	0		0	0
Sweden	42	0		0	0
Philippines	580	29		30	-0.07
Bangladesh	205	7		8	-0.18
Saudi Arabia	145	4		5	-0.19
Vanuatu	197	6		7	-0.31
Italy	344	12		16	-0.45
United Kingdom (UK)	518	18		26	-0.62
Netherlands	308	9		14	-0.62
United States of America	161	3		5	-0.68
Gibraltar (UK)	111	1		3	-0.80
Cyprus	1,621	60		96	-0.81
Viet Nam	2,439	93		150	-0.83
Tuvalu	411	11		20	-0.85
Thailand	788	23		43	-0.95
Malta	3,481	118		218	-1.02
Antigua and Barbuda	901	25		50	-1.04
Russian Federation	971	27		54	-1.05
Portugal	848	22		47	-1.10
Panama	24,624	816		1657	-1.17
Taiwan, China	308	5		14	-1.18
Greece	957	23		54	-1.20
Liberia	8,485	255		555	-1.23
Isle of Man (UK)	660	14		35	-1.23
Cayman Islands (UK)	338	5		15	-1.29
Belgium	115	0		3	-1.37
Denmark	545	8		28	-1.46
Japan	623	9		33	-1.50
Marshall Islands	8,582	188		561	-1.51
Malaysia	583	8		30	-1.52
France	144	0		5	-1.58
Norway	768	10		42	-1.61
Bahamas	2,233	37		136	-1.61
Germany	300	2		13	-1.63
Bermuda (UK)	176	0		6	-1.71
Singapore	6,638	60		430	-1.96
Hong Kong, China	9,408	72		617	-2.07
Korea, Republic of	4,027	26		255	-2.12
China	1,797	6		107	-2.43

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 55.

$p=7\%$

$Z_{95\%}=1.645$

$q=3\%$

Table 9: INSPECTIONS AND DETENTIONS PER FLAG

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2017	2018	2019	Total	2017	2018	2019	Total	
Algeria	0	0	3	3	0	0	2	2	66.67
Antigua and Barbuda	374	280	247	901	4	10	11	25	2.77
Argentina	2	1	0	3	0	0	0	0	0
Australia	13	2	9	24	0	0	0	0	0
Bahamas	757	749	727	2,233	17	9	11	37	1.66
Bahrain	2	0	1	3	1	0	0	1	33.33
Bangladesh	52	62	91	205	2	2	3	7	3.41
Barbados	19	26	26	71	3	5	2	10	14.08
Belgium	30	39	46	115	0	0	0	0	0
Belize	876	823	832	2,531	54	64	65	183	7.23
Bermuda (UK)	69	48	59	176	0	0	0	0	0
Brazil	7	3	10	20	0	0	0	0	0
Brunei Darussalam	6	6	5	17	0	0	0	0	0
Cambodia	2	0	1	3	0	0	1	1	33.33
Cameroon	0	1	1	2	0	0	1	1	50.00
Cayman Islands (UK)	117	109	112	338	0	1	4	5	1.48
Chile	10	13	9	32	0	0	0	0	0
China	543	608	646	1,797	1	2	3	6	0.33
Colombia	0	1	1	2	0	0	0	0	0
Comoros	16	9	19	44	4	1	1	6	13.64
Cook Islands	33	31	28	92	2	3	2	7	7.61
Croatia	37	35	20	92	0	3	4	7	7.61
Curacao	11	11	13	35	1	0	0	1	2.86
Cyprus	532	538	551	1,621	14	22	24	60	3.70
Denmark	173	203	169	545	4	2	2	8	1.47
Dominica	26	36	27	89	1	3	1	5	5.62
Ecuador	2	1	3	6	0	1	2	3	50.00
Egypt	6	5	2	13	0	1	0	1	7.69
Equatorial Guinea	1	5	0	6	0	0	0	0	0
Ethiopia	9	4	4	17	2	0	0	2	11.76
Falkland Islands (UK) (Malvinas)	3	2	3	8	0	0	0	0	0
Faroe Islands (Denmark)	1	1	0	2	0	0	0	0	0
Fiji	23	2	4	29	11	0	1	12	41.38
Finland	1	2	0	3	0	0	0	0	0
France	46	45	53	144	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2017	2018	2019	Total	2017	2018	2019	Total	
Gabon	0	0	2	2	0	0	0	0	0
Germany	108	103	89	300	1	0	1	2	0.67
Gibraltar (UK)	50	42	19	111	1	0	0	1	0.90
Greece	320	328	309	957	5	9	9	23	2.40
Honduras	1	2	0	3	0	1	0	1	33.33
Hong Kong, China	3,109	3,158	3,141	9,408	21	29	22	72	0.77
India	88	83	77	248	4	5	5	14	5.65
Indonesia	196	267	298	761	17	17	11	45	5.91
Iran	44	48	42	134	2	4	1	7	5.22
Isle of Man (UK)	228	221	211	660	5	3	6	14	2.12
Israel	5	11	5	21	0	0	0	0	0
Italy	119	115	110	344	3	4	5	12	3.49
Jamaica	36	22	24	82	3	4	3	10	12.20
Japan	195	216	212	623	1	4	4	9	1.44
Jordan	1	2	0	3	0	1	0	1	33.33
Kiribati	120	66	35	221	10	9	3	22	9.95
Korea, Democratic People's Republic	185	79	51	315	29	8	6	43	13.65
Korea, Republic of	1,394	1,363	1,270	4,027	7	14	5	26	0.65
Kuwait	21	24	16	61	0	0	1	1	1.64
Liberia	2,520	2,819	3,146	8,485	73	88	94	255	3.01
Libya	5	1	3	9	1	0	0	1	11.11
Lithuania	0	1	1	2	0	0	0	0	0
Luxembourg	21	12	37	70	0	0	1	1	1.43
Malaysia	186	192	205	583	3	1	4	8	1.37
Maldives	0	2	3	5	0	0	0	0	0
Malta	1,124	1,177	1,180	3,481	40	41	37	118	3.39
Marshall Islands	2,667	2,920	2,995	8,582	53	67	68	188	2.19
Mauritius	1	0	3	4	0	0	0	0	0
Mexico	0	0	1	1	0	0	0	0	0
Micronesia, Federated States of	67	3	0	70	8	1	0	9	12.86
Moldova	1	1	2	4	1	1	0	2	50.00
Mongolia	87	83	91	261	13	11	13	37	14.18
Montenegro	4	1	4	9	0	0	1	1	11.11
Myanmar	7	12	8	27	1	0	1	2	7.41
Nauru	0	0	3	3	0	0	0	0	0
Netherlands	101	103	104	308	4	3	2	9	2.92

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2017	2018	2019	Total	2017	2018	2019	Total	
New Zealand	3	4	3	10	0	0	0	0	0
Niue	59	43	25	127	9	4	4	17	13.39
Norway	249	248	271	768	2	3	5	10	1.30
Pakistan	12	14	13	39	2	0	1	3	7.69
Palau	89	74	76	239	12	8	9	29	12.13
Panama	8,261	8,151	8,212	24,624	273	248	295	816	3.31
Papua New Guinea	8	4	0	12	1	0	0	1	8.33
Peru	3	5	1	9	1	0	0	1	11.11
Philippines	213	197	170	580	13	11	5	29	5.00
Portugal	225	329	294	848	3	12	7	22	2.59
Qatar	7	21	13	41	1	1	1	3	7.32
Russian Federation	308	350	313	971	6	13	8	27	2.78
Saint Kitts and Nevis	21	10	3	34	2	4	0	6	17.65
Saint Vincent and the Grenadines	66	58	43	167	2	2	4	8	4.79
Samoa	3	2	0	5	1	1	0	2	40.00
Saudi Arabia	45	49	51	145	1	1	2	4	2.76
Sierra Leone	421	418	363	1,202	37	45	44	126	10.48
Singapore	2,309	2,198	2,131	6,638	18	18	24	60	0.90
South Africa	2	2	2	6	0	0	1	1	16.67
Spain	8	9	14	31	0	0	0	0	0
Sri Lanka	16	18	12	46	1	1	1	3	6.52
Sweden	15	14	13	42	0	0	0	0	0
Switzerland	36	26	18	80	2	0	0	2	2.50
Taiwan, China	95	94	119	308	2	1	2	5	1.62
Tanzania	33	9	2	44	12	3	0	15	34.09
Thailand	269	275	244	788	10	4	9	23	2.92
Togo	446	413	342	1,201	63	51	60	174	14.49
Tonga	3	2	0	5	0	2	0	2	40.00
Turkey	44	25	37	106	3	0	2	5	4.72
Tuvalu	139	141	131	411	1	6	4	11	2.68
Ukraine	7	7	6	20	2	1	1	4	20.00
United Arab Emirates (UAE)	0	0	1	1	0	0	0	0	0
United Kingdom (UK)	177	191	150	518	3	7	8	18	3.47
United States of America	48	64	49	161	0	2	1	3	1.86
Uruguay	1	0	0	1	1	0	0	1	100.00
Vanuatu	74	68	55	197	1	4	1	6	3.05

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2017	2018	2019	Total	2017	2018	2019	Total	
Viet Nam	788	877	774	2,439	28	26	39	93	3.81
Ship's registration withdrawn	2	1	2	5	1	1	2	4	80.00
Total	31,315	31,589	31,372	94,276	941	934	983	2,858	3.03

Figure 15: COMPARISON OF INSPECTIONS PER SHIP TYPE

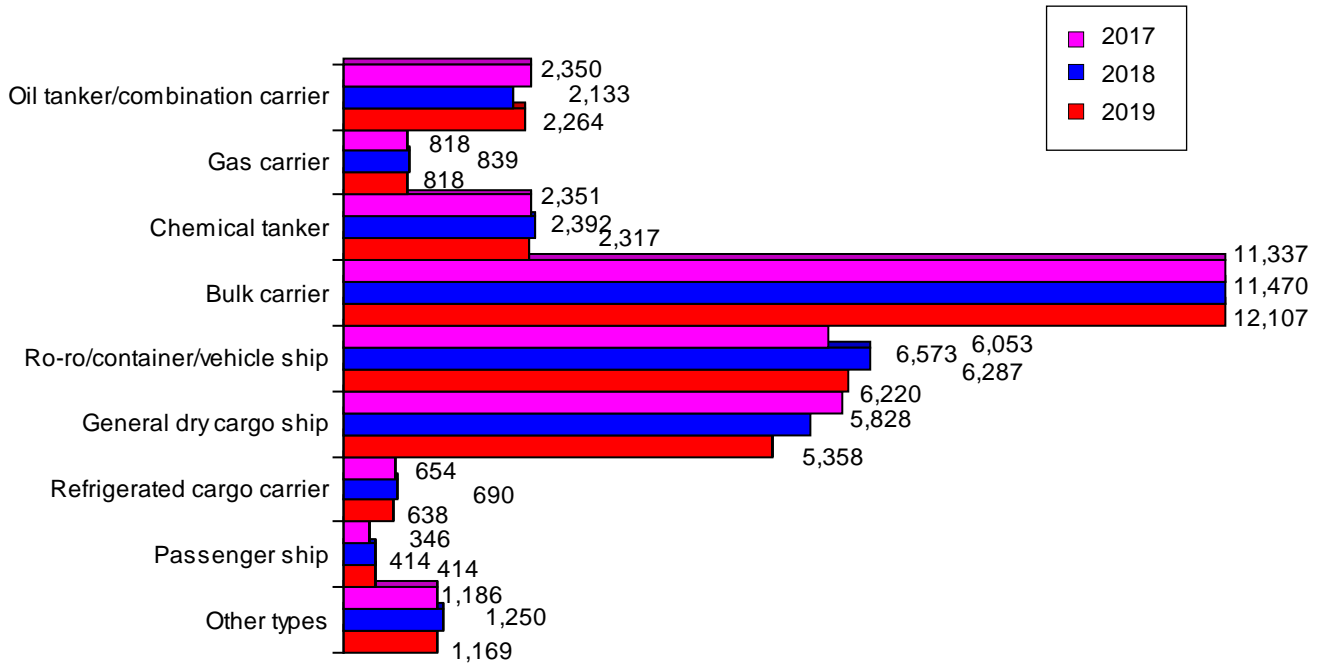


Figure 16: COMPARISON OF DETENTIONS PER SHIP TYPE

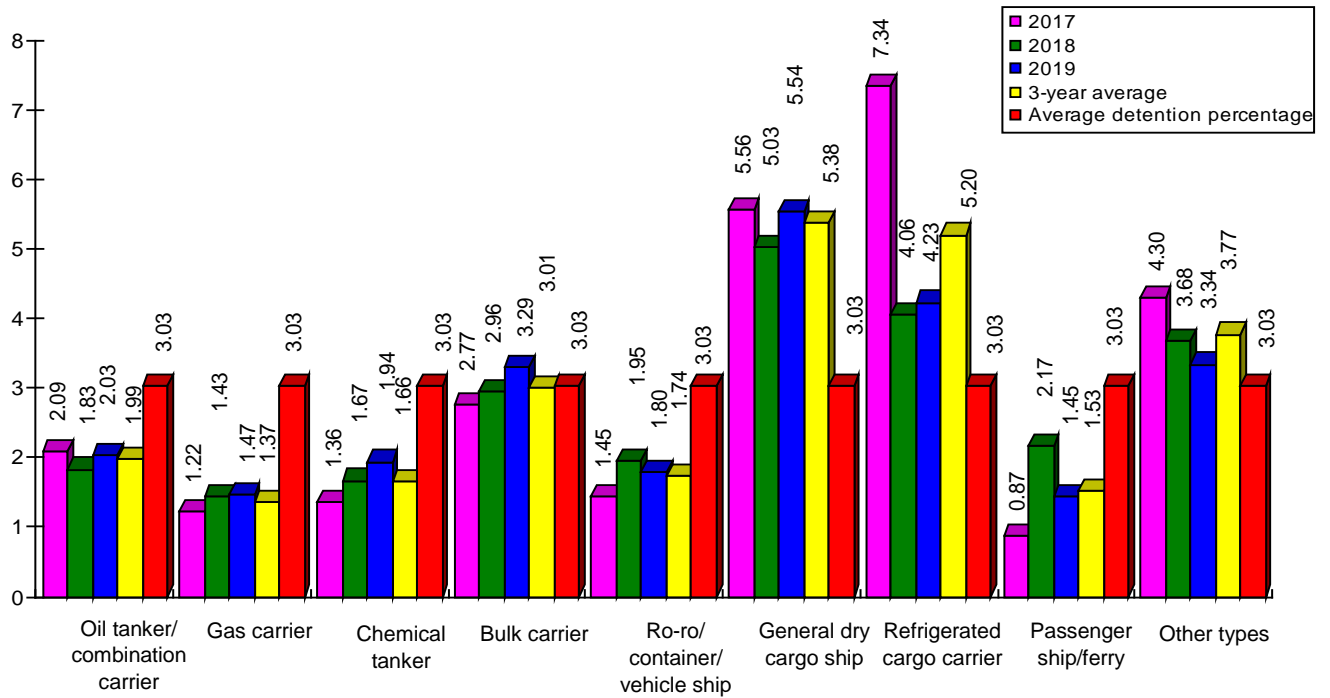
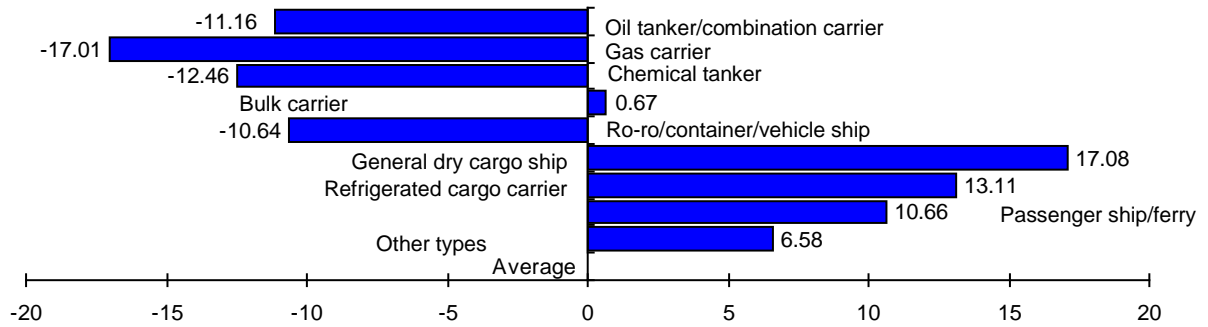


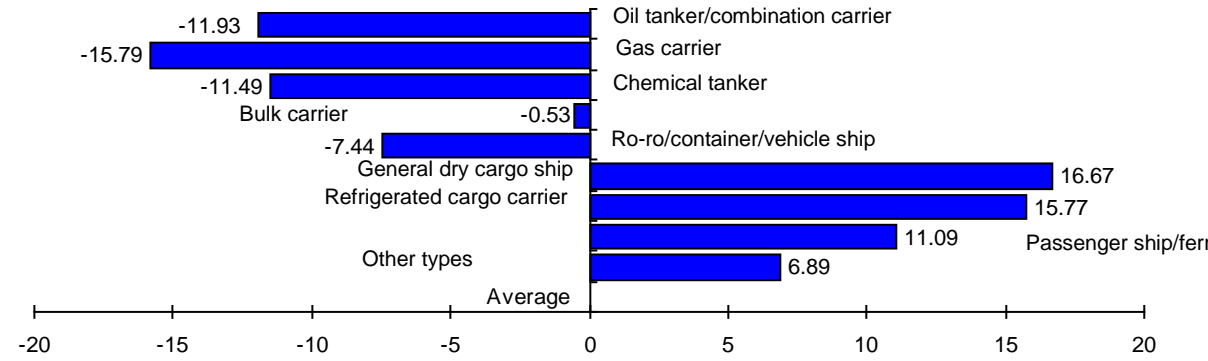
Table 10: INSPECTIONS AND DETENTIONS PER SHIP TYPE

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2017	2018	2019	Total	2017	2018	2019	Total	
NLS tanker	70	58	60	188	2	2	2	6	3.19
Combination carrier	36	34	37	107	0	2	1	3	2.80
Oil tanker	2,244	2,041	2,167	6,452	47	35	43	125	1.94
Gas carrier	818	839	818	2,475	10	12	12	34	1.37
Chemical tanker	2,351	2,392	2,317	7,060	32	40	45	117	1.66
Bulk carrier	11,337	11,470	12,107	34,914	314	339	398	1,051	3.01
Vehicle carrier	806	792	717	2,315	4	9	8	21	0.91
Container ship	5,154	5,705	5,481	16,340	78	114	98	290	1.77
Ro-Ro cargo ship	93	76	89	258	6	5	7	18	6.98
General cargo/multi-purpose ship	6,220	5,828	5,358	17,406	346	293	297	936	5.38
Refrigerated cargo carrier	654	690	638	1,982	48	28	27	103	5.20
Woodchip carrier	235	251	250	736	3	5	3	11	1.49
Livestock carrier	65	66	70	201	5	4	2	11	5.47
Ro-Ro Passenger ship	85	103	100	288	0	2	1	3	1.04
Passenger ship	261	311	314	886	3	7	5	15	1.69
Factory ship	9	6	5	20	1	0	0	1	5.00
Heavy load carrier	81	107	120	308	3	6	4	13	4.22
Offshore service vessel	101	125	98	324	3	2	2	7	2.16
MODU & FPSO	3	4	6	13	0	0	0	0	0
High speed passenger craft	30	46	49	125	1	1	0	2	1.60
Special purpose ship	84	79	78	241	1	4	2	7	2.90
High speed cargo craft	0	1	2	3	0	0	0	0	0
Tugboat	214	245	204	663	10	7	6	23	3.47
Others	364	320	287	971	24	17	20	61	6.28
Total	31,315	31,589	31,372	94,276	941	934	983	2,858	3.03

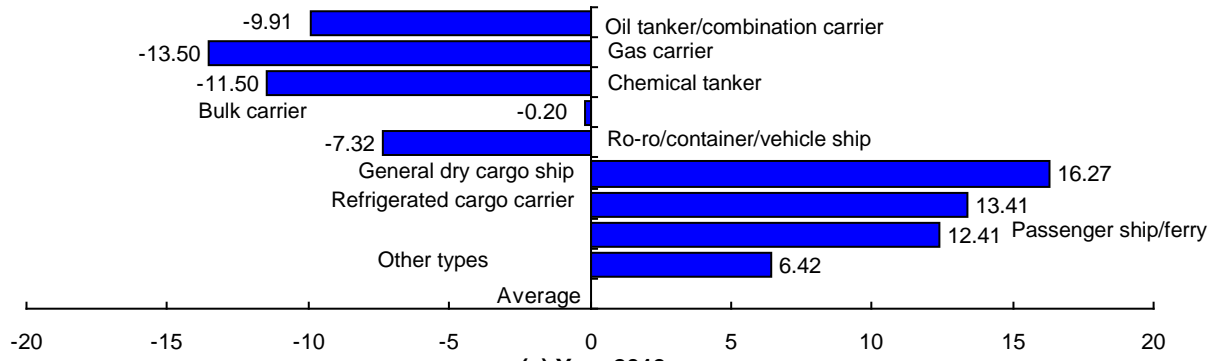
Figure 17: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE



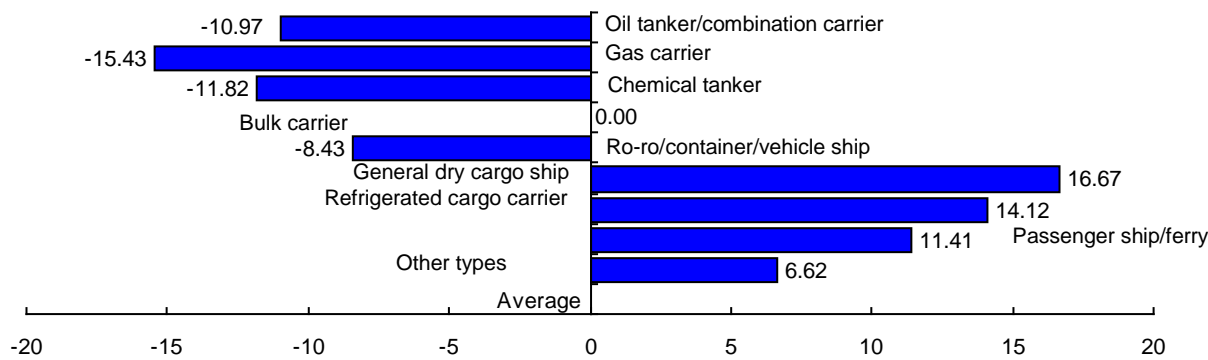
(a) Year 2017



(b) Year 2018



(c) Year 2019



(d) 3-year summary

* % 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 %
	2017	2018	2019	Total	2017	2018	2019	Total	
Oil tanker/combination carrier	2,350	2,133	2,264	6,747	1,097	967	1,108	3,172	47.01
Gas carrier	818	839	818	2,475	334	348	371	1,053	42.55
Chemical tanker	2,351	2,392	2,317	7,060	1,067	1,095	1,097	3,259	46.16
Bulk carrier	11,337	11,470	12,107	34,914	6,633	6,508	7,101	20,242	57.98
Ro-ro/container/vehicle ship	6,053	6,573	6,287	18,913	2,857	3,275	3,240	9,372	49.55
General dry cargo ship	6,220	5,828	5,358	17,406	4,660	4,309	4,025	12,994	74.65
Refrigerated cargo carrier	654	690	638	1,982	464	504	461	1,429	72.10
Passenger ship	346	414	414	1,174	237	283	295	815	69.42
Other types	1,186	1,250	1,169	3,605	764	802	763	2,329	64.60
Total	31,315	31,589	31,372	94,276	18,113	18,091	18,461	54,665	57.98

Table 12: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2017-2019	No. of overall detentions 2017-2019	No. of RO responsible detentions 2017-2019	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Aegean Register of Shipping	2	0	0	0	0	0
American Bureau of Shipping	11,754	203	3	1.73	0.03	1.48
American Register of Shipping	73	0	0	0	0	0
Arados Bureau for Sea Services	2	0	0	0	0	0
Asia Classification Society	39	3	2	7.69	5.13	66.67
Asia Shipping Certification Services	2	1	0	50.00	0	0
Biro Klasifikasi Indonesia	371	26	4	7.01	1.08	15.38
Bulgarski Koraben Registrar	5	0	0	0	0	0
Bureau Veritas	12,000	394	11	3.28	0.09	2.79
C.T.M. Inspection and Classification Company, S. de R.L.	1	1	0	100.00	0	0
China Classification Society	7,589	57	0	0.75	0	0
Columbus American Register	7	1	0	14.29	0	0
Cosmos Marine Bureau	344	51	13	14.83	3.78	25.49
CR Classification Society	684	16	0	2.34	0	0
Croatian Register of Shipping	135	8	1	5.93	0.74	12.50
Cyprus Bureau of Shipping	12	0	0	0	0	0
DNV GLAS	25,444	531	12	2.09	0.05	2.26
Dromon Bureau of Shipping	240	25	1	10.42	0.42	4.00
Ferriby Marine	2	0	0	0	0	0
Foresight Ship Classification	30	3	1	10.00	3.33	33.33
Global Marine Bureau	23	4	0	17.39	0	0
Global Shipping Bureau	1	0	0	0	0	0
Hellenic Register of Shipping	10	0	0	0	0	0
Horizon International of Naval Surveying and Inspection Bureau, S.A.	1	0	0	0	0	0
Icons Marine Services PTE Ltd	1	0	0	0	0	0
Indian Register of Shipping	254	15	0	5.91	0	0
Inspeccion y Clasificacion Maritima	1	0	0	0	0	0
Intermaritime Certification Services, S.A.	2,453	140	11	5.71	0.45	7.86
International Marine Survey Association	3	0	0	0	0	0
International Maritime Register	23	1	0	4.35	0	0
International Naval Surveys Bureau	109	8	0	7.34	0	0
International Register of Shipping	410	47	6	11.46	1.46	12.77
International Ship Classification	480	46	13	9.58	2.71	28.26
Iranian Classification Society	89	8	0	8.99	0	0
Isthmus Bureau of Shipping	1,410	93	6	6.60	0.43	6.45
Isthmus Maritime Classification Society S.A.	13	0	0	0	0	0
Korea Classification Society (former Joson Classification Society)	456	44	8	9.65	1.75	18.18
Korea Ship Safety Technology Authority	64	0	0	0	0	0
Korean Register of Shipping	9,399	156	3	1.66	0.03	1.92
Libyan Surveyor Mr. Sif Ennasar Abdulhamid Giahmi	1	0	0	0	0	0
Limdal Marine Services	1	0	0	0	0	0
Lloyd's Register	14,604	331	16	2.27	0.11	4.83
M&P Surveyors, S. de R.L. de C.V.	3	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections 2017-2019	No. of overall detentions 2017-2019	No. of RO responsible detentions 2017-2019	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Macosnar Corporation	157	9	0	5.73	0	0
Maritime Bureau of Africa	26	8	2	30.77	7.69	25.00
Maritime Bureau of Shipping	3	0	0	0	0	0
Maritime Technical Systems and Services	26	3	1	11.54	3.85	33.33
Mediterranean Shipping Register	1	0	0	0	0	0
National Cargo Bureau Inc.	2	0	0	0	0	0
National Shipping Adjusters Inc	32	5	1	15.63	3.13	20.00
New United International Marine Services Ltd	205	18	2	8.78	0.98	11.11
Nippon Kaiji Kyokai	32,871	816	27	2.48	0.08	3.31
Novel Classification Society S.A.	4	0	0	0	0	0
Overseas Marine Certification Services	1,257	130	14	10.34	1.11	10.77
Panama Bureau of Shipping	52	4	0	7.69	0	0
Panama Marine Survey and Certification Services, Inc.	13	1	0	7.69	0	0
Panama Maritime Documentation Services	1,425	112	11	7.86	0.77	9.82
Panama Maritime Surveyors Bureau Inc	4	2	0	50.00	0	0
Panama Register Corporation	77	4	0	5.19	0	0
Panama Shipping Registrar Inc.	163	18	2	11.04	1.23	11.11
Phoenix Register of Shipping	22	3	1	13.64	4.55	33.33
Polski Rejestr Statkow	174	7	1	4.02	0.57	14.29
Qualitas Register of Shipping S.A.	3	0	0	0	0	0
Register of Shipping (Albania)	2	0	0	0	0	0
Registro Brasileiro de Navios de Aeronaves	3	0	0	0	0	0
Registro Cubano de Buques	2	0	0	0	0	0
RINA Services S.p.A.	3,407	113	1	3.32	0.03	0.88
RINAVE Portuguesa	11	1	0	9.09	0	0
Russian Maritime Register of Shipping	1,350	47	0	3.48	0	0
Russian River Register	4	1	0	25.00	0	0
Ship Classification Malaysia	86	3	0	3.49	0	0
Shipping Register of Ukraine	19	4	0	21.05	0	0
SingClass International Pte Ltd	156	25	7	16.03	4.49	28.00
Sing-Lloyd	273	28	6	10.26	2.20	21.43
Turkish Lloyd	1	0	0	0	0	0
Union Bureau of Shipping	1,183	144	23	12.17	1.94	15.97
Union Marine Classification Society	1	0	0	0	0	0
Universal Maritime Bureau	761	83	7	10.91	0.92	8.43
Universal Shipping Bureau	8	1	0	12.50	0	0
Venezuelan Register of Shipping	6	0	0	0	0	0
Veritas Register of Shipping	2	0	0	0	0	0
Vietnam Register	2,526	95	3	3.76	0.12	3.16
Other	166	19	1	11.45	0.60	5.26

See also the note in page 32.

Table 13: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2017-2019	No. of RO responsible detentions 2017-2019	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Cosmos Marine Bureau	344	13	12	2	1.31	Low
SingClass International Pte Ltd	156	7	6	0	1.23	
International Ship Classification	480	13	15	4	0.81	Medium
Sing-Lloyd	273	6	10	1	0.56	
Union Bureau of Shipping	1,183	23	32	15	0.46	
Korea Classification Society (former Josen Classification Society)	456	8	15	4	0.40	
Panama Shipping Registrar Inc.	163	2	7	0	0.32	
International Register of Shipping	410	6	13	3	0.29	
Croatian Register of Shipping	135	1	6	0	0.23	
New United International Marine Services Ltd	205	2	8	0	0.22	
Biro Klasifikasi Indonesia	371	4	12	2	0.15	
Polski Rejestr Statkow	174	1	7	0	0.15	
Dromon Bureau of Shipping	240	1	9	1	0.03	
Universal Maritime Bureau	761	7	22	8	-0.24	
Overseas Marine Certification Services	1,257	14	34	16	-0.24	
Indian Register of Shipping	254	0	9	1	-0.62	
Panama Maritime Documentation Services	1,425	11	38	19	-0.71	
Isthmus Bureau of Shipping	1,410	6	37	19	-1.18	
Intermaritime Certification Services, S.A.	2,453	11	61	37	-1.30	
Vietnam Register	2,526	3	63	38	-1.79	
CR Classification Society	684	0	20	7	-1.80	
Lloyd's Register	14,604	16	320	264	-1.87	
Bureau Veritas	12,000	11	266	214	-1.89	
Nippon Kaiji Kyokai	32,871	27	700	615	-1.91	
Russian Maritime Register of Shipping	1,350	0	36	18	-1.93	
RINA Services S.p.A.	3,407	1	82	54	-1.94	
DNV GL AS	25,444	12	546	472	-1.95	
Korean Register of Shipping	9,399	3	211	165	-1.96	
American Bureau of Shipping	11,754	3	261	210	-1.96	

Recognized organization (RO)	No. of overall inspections 2017-2019	No. of RO responsible detentions 2017-2019	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
China Classification Society	7,589	0	172	131	-1.99	

- 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

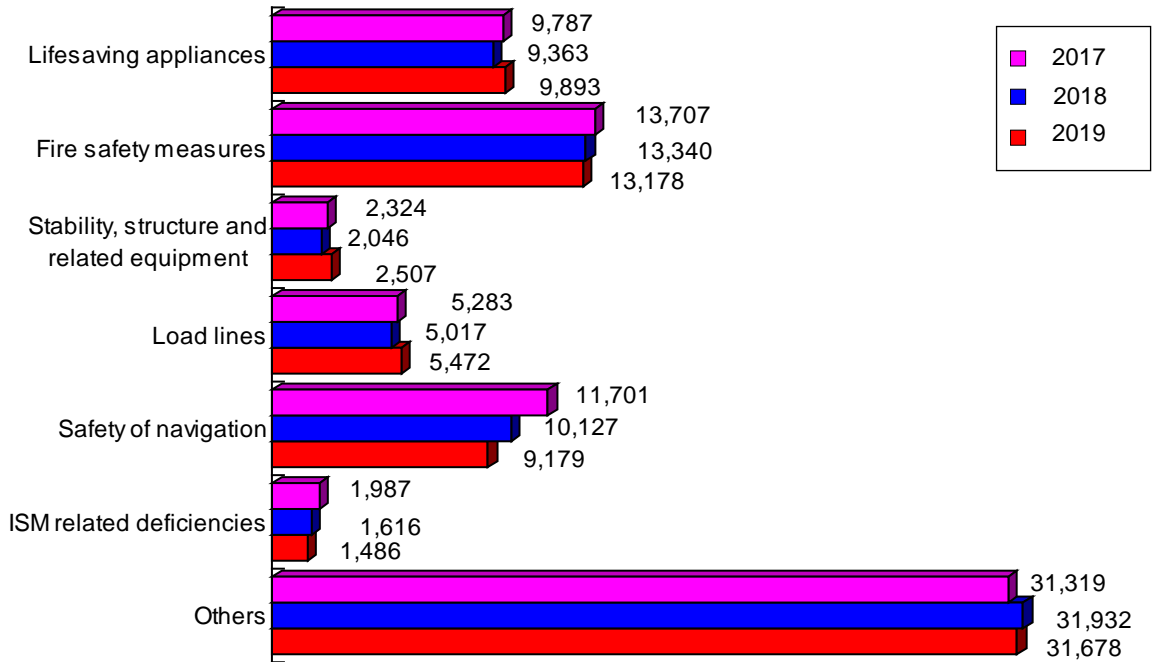


Table 14: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency		Number of deficiencies		
		2017	2018	2019
	Crew Certificates	1,462	1,148	1,026
Certificate & Documentation	Documents	3,953	3,814	2,943
	Ship Certificates	1,937	1,782	1,594
	Structural Conditions	2,324	2,046	2,507
Water/Weathertight conditions		5,283	5,017	5,472
Emergency Systems		4,350	4,128	5,157
Radio Communications		1,798	1,570	1,382
Cargo operations including		744	711	645
Fire safety		13,707	13,340	13,178
Alarms		455	520	537
Safety of Navigation		11,701	10,127	9,179
Life saving appliances		9,787	9,363	9,893
Dangerous goods		272	195	151
Propulsion and auxiliary		3,731	3,785	4,015
Working and Living Conditions	Living Conditions	383	410	334
	Working Conditions	2,288	2,126	1,913
Labour Conditions	Minimum requirements for seafarers	73	48	31
	Conditions of employment	631	545	444
	Accommodation, recreational facilities, food and catering	1,354	1,094	1,426
	Health protection, medical care, social security	2,504	2,571	3,023
Pollution prevention	Anti Fouling	22	16	8
	Ballast Water	261	812	1,522
	MARPOL Annex I	1,468	1,508	1,514
	MARPOL Annex II	30	16	25
	MARPOL Annex III	10	13	10
	MARPOL Annex IV	1,131	1,256	1,350
	MARPOL Annex V	1,014	1,673	1,181
	MARPOL Annex VI	886	1,623	954
ISM		1,987	1,616	1,486
Other		562	568	493
Total		76,108	73,441	73,393
ISPS		1,345	1,516	1,157
Grand total		77,453	74,957	74,550

Figure 19: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

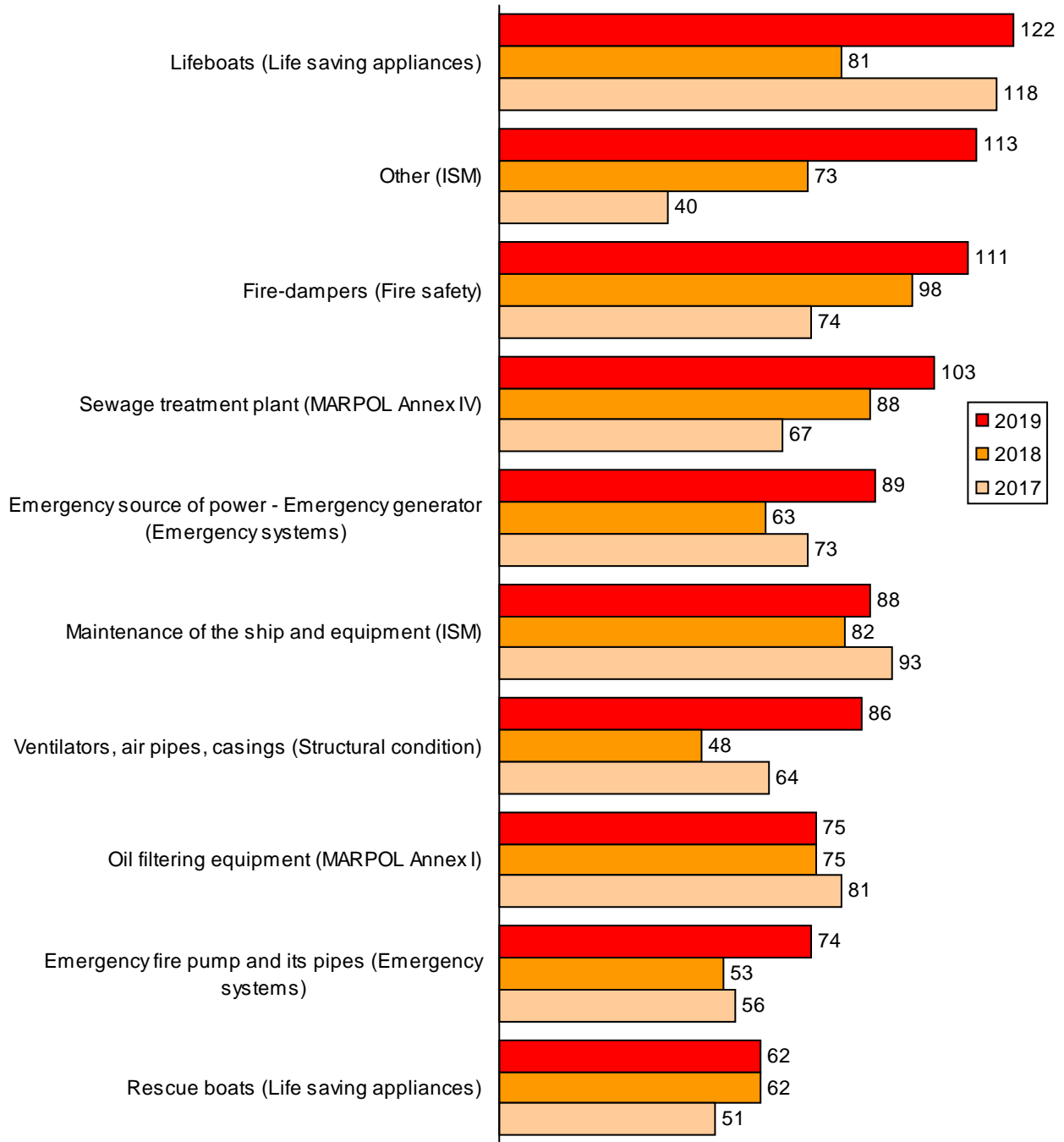


Table 15: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

No.	Most frequent deficiencies	Year		
		2017	2018	2019
1	Lifeboats (Life saving appliances)	118	81	122
2	Other (ISM)	40	73	113
3	Fire-dampers (Fire safety)	74	98	111
4	Sewage treatment plant (MARPOL Annex IV)	67	88	103
5	Emergency source of power - Emergency generator (Emergency systems)	73	63	89
6	Maintenance of the ship and equipment (ISM)	93	82	88
7	Ventilators, air pipes, casings (Structural condition)	64	48	86
8	Oil filtering equipment (MARPOL Annex I)	81	75	75
9	Emergency fire pump and its pipes (Emergency systems)	56	53	74
10	Rescue boats (Life saving appliances)	51	62	62

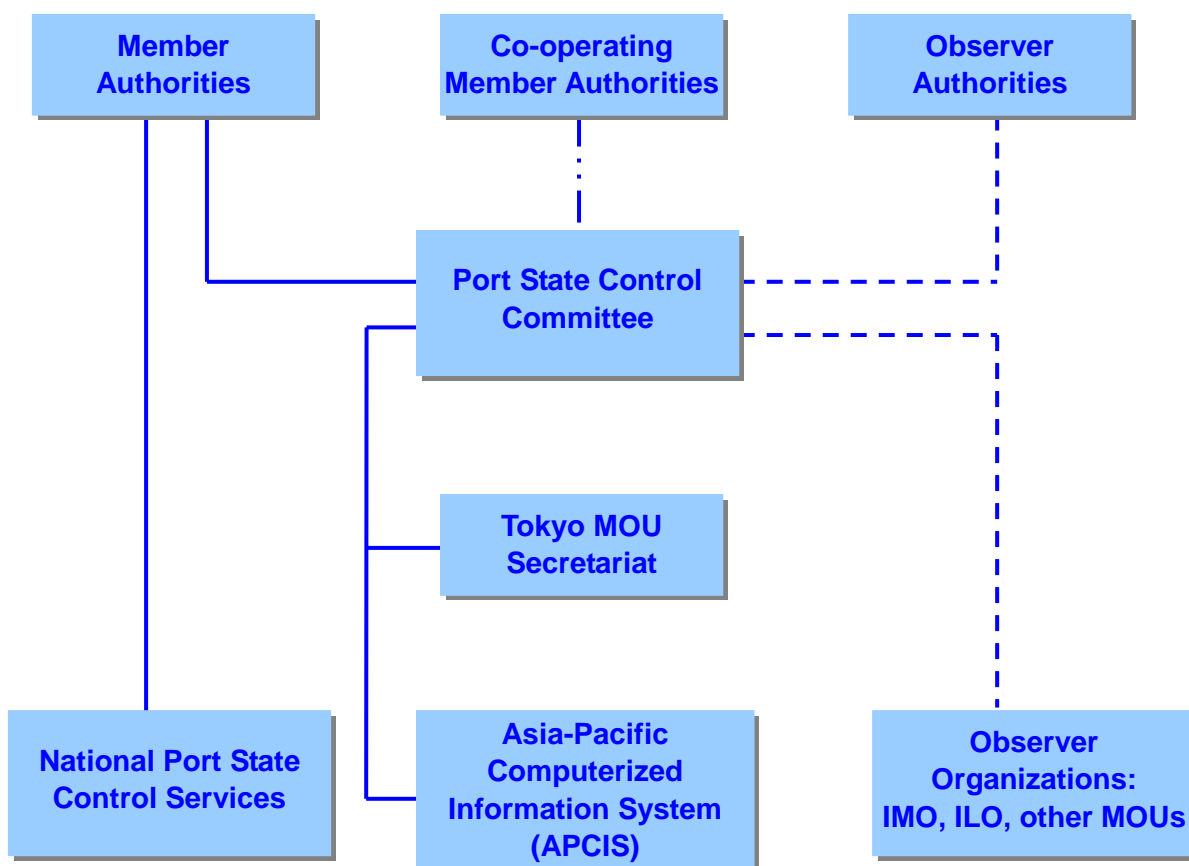
Table 16: LIST OF UNDER-PERFORMING SHIPS

IMO No.	Ship name (at the day of detention)	Flag	IMO company No.	No. of times on the list
8501414 ¹	SIDIMI	Belize	5519245	10
8501414 ¹	SIDIMI	Belize	5042187	10
8513390	HANSUNG	Togo	5519245	4
8654637	MIDLAND	Sierra Leone	5634153	1
8669644 ¹	GANG TONG HAI 9	Belize	5827147	3
8669644 ¹	GANG TONG HAI 9	Belize	5513586	3
8695863 ²	BUSY BEE	Belize	4185008	4
8695863 ²	YUN TONG	Togo	5513586	4
8695863 ²	YUN TONG	Togo	5928388	4
8703634	QIAN JIN	Togo	6061913	2
8740137 ¹	DONG KUN 7	Palau	5952683	2
8740137 ¹	DONG KUN 7	Palau	4205871	2
8740137 ¹	DONG KUN 7	Palau	Unknown	2
8743531	HENG SHUN HAI	Panama	5747043	3
8795962	COSOCEAN	Panama	5127162	2
8817019	DONG ZHAO	Belize	5409125	7
8844218	XIN HAI 888	Belize	5940270	3
8844555	HARMONY RICH	Sierra Leone	5315345	2
8859029 ³	LIAN TONG	Togo	5511681	5
8859029 ³	LIAN TONG	Sierra Leone	5511681	5
8907254	ELDUGA	Togo	5519245	4
9005091	YUAN XIANG	Togo	5555424	3
9054779	LUCKY STAR 9	Palau	5773875	8
9113226	AMGU	Belize	5519245	5
9124172 ¹	JIA XIN	Panama	6097236	1
9124172 ¹	ZHONG JIAN	Panama	5283251	1
9342944	CAPTAIN KANG	Togo	5173250	3
9387619	JET	Panama	5167945	11
9415313	YUAN QIAO	Belize	5827147	1
9543835	XIN ZHONG RUI 15	Belize	5921893	9
9622394 ¹	BAO PING	Togo	6073041	1
9622394 ¹	BAO PING	Togo	6036742	1

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

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:

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

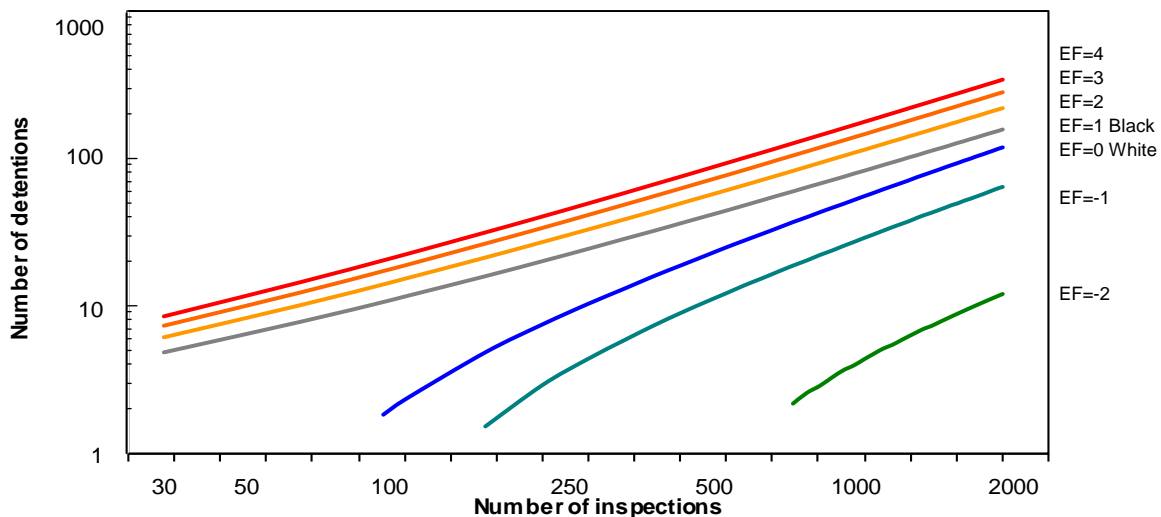
$$u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

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 amount 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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