

**ANNUAL REPORT**

**ON**

**PORT STATE CONTROL**

**IN THE ASIA-PACIFIC REGION**

**2012**



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Further information may be obtained from:

The Tokyo MOU Secretariat

Ascend Shimbashi 8F

6-19-19 Shimbashi

Minato-ku, Tokyo

Japan 105-0004

Tel: +81-3-3433-0621

Fax: +81-3-3433-0624

This Report is also available at Tokyo MOU web-site  
(<http://www.tokyo-mou.org>) on the Internet.

## FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2012**.

The member Authorities of the Tokyo MOU carried out a total of 30,929 inspections in 2012, which creates a new record not only of its own but also for the regional PSC regimes around the world. Detentions have decreased both in number and in percentage in 2012. It is for the first time that the regional detention rate is below 5%, except for the year of starting operation of the Tokyo MOU. This can be seen as a positive outcome of effective operation of PSC programme by the Tokyo MOU Authorities. There are several notable developments in the Tokyo MOU in 2012, namely: implementation of the new coding system, enacting measures on under-performing ships permanently, renewal of the MOU web-site and establishing the open forum with the industry.

This annual report outlines the port State control developments and activities of the Tokyo MOU in 2012. Moreover, the report also provides port State control statistics and analysis on the results of inspections carried out by member Authorities during the year.

The Tokyo MOU has played a key role in promotion of maritime safety, protection of the marine environment and safeguarding living and working conditions on board ships in the Asia-Pacific region since its establishment. The Tokyo MOU will continue its commitment and efforts to enhance and improve PSC activities so as to eliminate substandard ships to the maximum extent in the region.

Abdul Samad Bin Shaik Osman  
Chairman  
Port State Control Committee

Mitsutoyo Okada  
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 eighteenth issue and covers port State control activities and developments in the year 2012.

The Memorandum was concluded in Tokyo on 1 December 1993. The following maritime Authorities in the Asia-Pacific region are the signatories to the Memorandum: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Solomon Islands, Thailand, Vanuatu and Viet Nam. The Memorandum came into effect on 1 April 1994.

In accordance with the provisions of the Memorandum, the Authorities which have signed and formally accepted the Memorandum or which have been accepted with unanimous consent of the Port State Control Committee would become full members. Currently, the Memorandum has 18 full members, namely: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation,

Singapore, Thailand, Vanuatu and Viet Nam. A maritime Authority which declared the clear intention to fully adhere to the Memorandum within a three-year period would be accepted as a co-operating member with unanimous consent of the Port State Control Committee. The Republic of the Marshall Islands and Peru are participating in the Tokyo MOU as the co-operating member Authorities at the moment.

The main objective of the Memorandum is to establish an effective port State control regime in the Asia-Pacific region through co-operation of its members and harmonization of their activities, to eliminate substandard shipping so as to promote maritime safety, to protect the marine environment and to safeguard 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 of the member Authorities, co-operating member Authorities and observers. The observer status has been granted the following maritime Authorities and the inter-governmental organizations by the Committee: Democratic People's Republic of Korea, Macao (China), Solomon Islands, United States Coast Guard, the International Maritime Organization (IMO), the International Labour Organization (ILO), the Paris MOU, the Viña del Mar Agreement, the Indian Ocean

MOU and the Black Sea MOU. The Secretariat of the Memorandum is located in Tokyo, Japan.

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); and
- the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001.

## REVIEW OF YEAR 2012

The Tokyo MOU implemented a new coding system in 2012, which was an achievement of the joint work done by the Paris and the Tokyo Memoranda. The new coding system would be adopted widely by other regional PSC regimes and industrial organizations for information exchange. After nearly two years' trial, the Tokyo MOU decided to implement the measures against the under-performing ships permanently. It is encouraging that the number of under-performing ships every month now has been decreasing, comparing with the early time of the trial implementation.

As informed in the previous Annual Report, the Tokyo MOU was considering establishment of a scheme for exchange views and carrying out dialogues with the industry. In this context, a first open forum with the industry was convened in conjunction with the Port State Control Committee meeting in Chile. The forum was attended by the International Association of Classification societies (IACS), the Association of Asian Classification Society (ACS), INTERCARGO, the International Chamber of Shipping and the International Shipping Federation (ICS/ISF) and the International Transport Workers' Federation (ITF).

The concentrated inspection campaign (CIC)



on Fire Safety System (FSS) was conducted from 1 September to 30 November 2012. During the campaign period, a total of 8,274 PSC inspections were conducted by the eighteen member Authorities, of which 6,606 were related to a CIC inspection. There were a total of 217 detentions recorded during the CIC inspections, among which 150 or 69% of them were detained as the direct results of the CIC. The CIC-topic related detention rate is 2.3% while the overall CIC detention rate 3.3%. A total of 4,279 CIC related deficiencies were recorded. The most significant deficiencies found during the campaign were related to fire-fighting equipment and appliances 659 (15.40%), followed with ready availability of fire-fighting equipment 470 (11%) and fire detection and alarm system 410 (9.58%). Although the overall results of the CIC is satisfactory generally, giving the fact that nearly 70% of the detentions was the CIC-topic related during the campaign period, the industry has not achieved an acceptable level of compliance with the relevant fire safety system requirements. This campaign was carried out jointly with the Paris MOU and also with participation by regional PSC regimes of the Black Sea MOU, the Indian

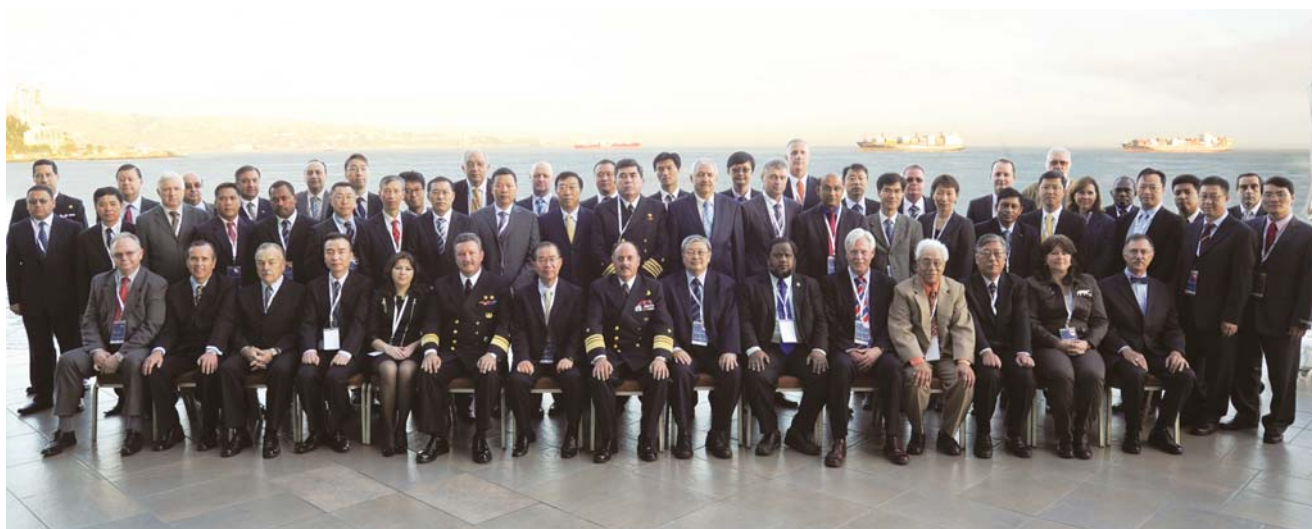
Ocean MOU, the Mediterranean MOU and the Viña del Mar Agreement.

The Tokyo MOU web-site was renewed in 2012. The new version of the web-site incorporates the new features of FAQ section, free text search, e-mail addresses of member Authorities and an on-line query form. Users can find the new design of the web-site is refreshing, professional and easy for use and navigation.

#### THE PORT STATE CONTROL COMMITTEE

The Port State Control Committee held its twenty-second meeting in Viña del Mar, Chile, from 16 to 19 April 2012. The meeting was hosted by the Directorate General of the Maritime Territory and Merchant Marine (DIRECTEMAR) of Chile. The meeting was chaired by Mr. Ong Hua Siong, Assistant Director (Ship Regulation and Development/ Port State Control), Shipping Division, Maritime and Port Authority of Singapore.

The twenty-second Committee meeting was attended by representatives of the member



The twenty-second Committee meeting, Viña del Mar, April 2012.

Authorities of Australia, Canada, Chile, China, Hong Kong (China), Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam; the co-operating member Authority of the Marshall Islands and observers from the DPR Korea, Macao (China), the United States Coast Guard, the Black Sea MOU, the Indian Ocean MOU, the Paris MOU and the Viña del Mar Agreement.

The Committee considered the application for Co-operating Member status by Peru. Having reviewed an evaluation report by the monitoring team, the Committee unanimously agreed to accept Peru as a Co-operating Member of the Tokyo MOU in accordance with the relevant provisions of the Memorandum.

The Committee considered the outcome of the further trial of measures against the under-performing ships. The Committee decided to implement the measures permanently. The Committee considered and approved the proposals for the renewal of the MOU web-site. The Committee adopted guidelines for PSC on Maritime Labour Convention (MLC) 2006 in principle and agreed to consider inclusion of the MLC as a relevant instrument under the Tokyo MOU at its next meeting, having noted that the conditions for entry into force of MLC 2006 would be met soon.

The Committee reviewed a detailed report on the results of the CIC on harmful substances (Marine Pollutants) carried in packaged form in 2010. The Committee agreed to submit an action paper regarding training on securing and stowage of dangerous to IMO as the output of the CIC. The Committee considered

a comprehensive report of the CIC on Structural Safety and the Load Lines which was conducted in 2011 with the Paris MOU jointly. The Committee approved the arrangements for the joint CIC on Fire Safety System (FSS) with the Paris MOU scheduled for September – November 2012. Moreover, the Committee agreed to prepare a further joint CIC with the Paris MOU on propulsion and auxiliary machinery in 2013 and to keep communications with the Paris MOU for the possible topics for CICs in 2014 and thereafter.

The Committee reviewed achievements and status of the action plan developed based on the strategic plan. The Committee noted with satisfaction the work done by the inter-sessional working group on consideration of new inspection regime (NIR). The Committee agreed in general to the proposed elements for the NIR and instructed the group to finalize its work by the time of next meeting.

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

- assessment of performance of member Authorities;
- establishment of an intersessional group for restructuring of the PSC Manual;
- approval of the general arrangement for organization of open forum for dialogue and exchange of views with the industry;
- change of currency used for financial contribution; and
- awarding the winner of the best deficiency

photo of the year.

The twenty-third meeting of the Port State Control Committee will be held in Singapore in January 2013.

#### TECHICAL WORKING GROUP (TWG)

The fifth meeting of the Technical Working Group (TWG) was held in Viña del Mar, Chile, from 13 to 14 April 2012, precedence of the twenty-second meeting of the Committee. The TWG05 meeting was chaired by Mr. Christopher Lindesay, Principal Systems Officer, Australian Maritime Safety Authority.

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

- 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;
- reports of intersessional groups: advisory group on information exchange (AG-IE), intersessional group on batch protocol (IG-BP) and intersessional group on statistics (IG-Statistics);
- activities and operation of the APCIS system;
- 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.

The meeting elected Mr. Kenny Crawford, Manager, International and Coastal Shipping, Maritime New Zealand, as the Vice-Chairman to succeed Mr. Ning Bo of China, who would be unable to complete his term by the next meeting.

#### 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, the Asia-Pacific Computerized Information System (APCIS), was established. The central site of the APCIS is located in Moscow, under the auspices of the Ministry of Transport of the Russian Federation.

The APCIS system 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 web-site (<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; and
- CIALA of the Viña del Mar Agreement.

### TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS

The second general training course for PSC officers was held in Yokohama, Japan, from 27 August to 21 September 2012. This was the eighth training course jointly organized by IMO and the Tokyo MOU. A total of 18 PSC officers participated in the training course. Eleven of them were from the Tokyo MOU Authorities of Chile, China, Indonesia, Macao (China), Malaysia, Papua New

Guinea, the Philippines, the Russian Federation, Thailand, Vanuatu and Viet Nam. The other seven were invited by IMO, one each from Abuja MOU, Caribbean MOU, Indian Ocean MOU, Mediterranean MOU and the Viña del Mar Agreement and two from Riyadh MOU. The course was conducted with the assistance by the Shipbuilding Research Center of Japan (SRC).



Training course for PSC officers

The four-week general training course is

composed of two-week classroom lectures, which provide trainees with a wide range of lectures and presentations relating to relevant IMO conventions, regulations and other crucial issues which are considered essential to conduct PSC, and onboard training during the following two weeks for giving trainees opportunities to use the theoretical knowledge gained through the



Onboard training





Onboard training

The twentieth seminar for PSC officers together with the Workshop on Capacity Building for Implementation and Management of IMO Regulations were held in Port Moresby, Papua New Guinea, from 16 to 19 July 2012. The seminar was hosted by the National Maritime Safety Authority of Papua New Guinea (NMSA). Participants from Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, the Republic of Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, Thailand, Vanuatu and Viet Nam attended the seminar and the workshop.

The major topics of the seminar were the CIC on Fire Safety System (FSS), introduction of Port State Control Procedures 2011 (Res. A.1052(27)), mandatory enclosed space training, safety issues of container ships, results of the CIC on Structural Safety and the Load Lines. Experts from the Australian

classroom lectures. Experts from the Ministry of Land, Infrastructure, Transport and Tourism of Japan (MLIT), SRC and the Secretariat delivered lectures on the relevant subjects. For the onboard training, participants were divided into eight groups to receive the practical training at ports of Yokohama, Niigata, Nagoya, Osaka, Kobe, Hiroshima, Takamatsu or Hakata respectively. In addition, a technical visit to a liferaft manufacturer was also arranged.



The twentieth seminar for PSC officers

Maritime Safety Authority (AMSA), Transport Canada and MLIT of Japan made the comprehensive and informative presentations on the relevant topics. One case study session was also conducted to discuss the actual cases provided by Authorities or reviewed by the detention review panel. In conjunction with the seminar, a Workshop on Capacity Building for Implementation and Management of IMO Regulations was organized jointly by IMO and the Tokyo MOU. Two experts invited by IMO delivered presentations on general introduction of IMO and IMO conventions, the Code of Implementation of Mandatory IMO Instruments, Voluntary IMO Member State Audit Scheme (VIMSAS), recent amendments



Specialized training course

to conventions and interpretation of vague regulations, development on PSC in IMO and introduction of PSCOs' decision support tool.

Two specialized training courses were conducted in 2012. The second specialized training course was organized in Hanoi, Viet Nam, from 13 to 15 February 2012, by the kind invitation of Vietnam Maritime

Administration (VINAMARINE). The subject of the second specialized training course was PSC inspection reporting, new coding system and the APCIS system. Participants from Australia, Chile, China, Fiji, Hong Kong (China), Indonesia, DPR Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand, Vanuatu and



Specialized training course



Viet Nam attended the training course. Experts from the APCIS and the Secretariat made presentations at the course. The third specialized training course was convened in Kuala Lumpur, Malaysia from 25 to 29 June 2012. The training course, hosted by the Marine Department of Malaysia, was pertaining to MARPOL issues. Speakers from the Marine Department of Malaysia, the Maritime and Port Authority of Singapore (MPA), PETRONAS and MISC were invited to provide lectures at the course. PSC officers from China, Fiji, Hong Kong (China), Indonesia, Macao (China), Malaysia, the Marshall Islands, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam participated in the course.

There were three expert missions organized in 2012. One mission was held in Batangas, the Philippines, from 22 to 26 October 2012. Experts from Japan conducted the training. The other two were in Viet Nam, i.e. Danang from 2 to 6 July 2012 and Ho Chi Minh City from 17 to 21 December 2012 respectively. Experts from the Republic of Korea were dispatched for the two missions.

Five PSC officer exchanges were completed in 2012, namely one PSC officer from Australia to China, one from Hong Kong (China) to Singapore, one from Japan to Australia, one from the Republic of Korea to New Zealand and one from the Russian Federation to Canada. Currently, the PSC officers exchange programme is implemented among the Authorities of Australia, Canada, China, Hong Kong (China), Japan, the Republic of Korea, New Zealand, the Russian Federation and Singapore.

The successful and effective implementation

of technical co-operation programmes enables the Tokyo MOU to enhance and improve its activities continuously. The technical co-operation activities have received full support from the Authorities and the continuous financial assistance from the Nippon Foundation.

#### **CO-OPERATION WITH OTHER REGIONAL PORT STATE CONTROL AGREEMENTS**

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 agreements (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 (IGO) associated with IMO, the Tokyo MOU has attended the meetings of the Flag State Implementation (FSI) Sub-Committee since 2006. The Tokyo MOU Secretariat presented at the twentieth session of FSI in March 2012.

In support of inter-regional collaboration on port State control, the Tokyo MOU holds an observer status of the Paris MOU, the Caribbean MOU and the Indian Ocean MOU. In a similar manner, the Tokyo MOU has granted an observer status to the Paris MOU,

the Indian Ocean MOU, the Viña del Mar Agreement and the Black Sea MOU.

The Tokyo MOU has established, and maintains, effective and close co-operation with the Paris MOU both at administrative and the 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 2012, continuous efforts and further coordinated actions by the two Memoranda were made on the following:

- submission of the results of CIC on Structural Safety and the Load Lines to FSI jointly;
- carrying out the joint CIC on Fire Safety System (FSS) 2012;
- preparation of the joint CICs on

Propulsion and Auxiliary Machinery 2013 and on Hours of Rest 2014;

- continuous submission to IMO on annual list of flags targeted by the Paris MOU, Tokyo MOU and the United States Coast Guard; and
- continuous analysis of performance of flag and RO and submission of the outcome to IMO jointly.

Under the project of technical co-operation with Indian Ocean MOU, a fourth and the final PSC training course was convened in Durban in South Africa, from 5 to 16 March 2012. The training was organized by the Tokyo and the Indian Ocean Memoranda, and IMO jointly. Experts from the Tokyo MOU Authorities of Australia, Hong Kong (China) and Japan and an officer from the Tokyo MOU Secretariat conducted the training. A total of 16



PSC training course for Indian Ocean MOU



participants from the Indian Ocean MOU Authorities as well as other regional PSC agreements attended the training course. The training course was hosted by the South African Maritime Safety Authority (SAMSA) and with the financial support provided by the Nippon Foundation and IMO.

A new project of technical co-operation with the Viña del Mar Agreement has been initiated. Necessary preparations have been conducted. A first PSC training course will be organized in Ecuador March 2013.

## PORT STATE CONTROL UNDER THE TOKYO MOU, 2012

### INSPECTIONS

In 2012, 30,929 inspections, involving 16,439 individual ships, were carried out on ships registered under 101 flags. Figure 2 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. Out of 30,929 inspections, there were 19,250 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 24,019\*, the inspection rate in the region was approximately 68%\*\* in 2012 (see Figure 1). It is notable that the trend of increase of number of inspections and inspection rate has been maintained.



Information on inspections according to ships' flag is shown in Table 3.

Figures summarizing inspections according to ship type are set out in Figure 3 and Table 4.

\* 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.



Inspection results regarding recognized organizations are shown in Table 5.

### 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 will not 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 2012, 1,421 ships registered under 67 flags were detained because of serious deficiencies found onboard. The detention rate of ships



inspected was 4.59%. It is a good sign that both number of detentions and detention rate decreased, comparing with the last year.

Figure 4 shows the detention rate by flag that had at least 20 port State inspections and whose detention rate was above the average regional rate. Figure 5 gives the detention rate by ship type. A newly introduced Figure 7 shows the most frequent detainable deficiencies found during inspections.

Black-grey-white list (Table 7) indicates levels of performance of flags during three-year rolling period. The black-grey-white list for 2010-2012 consists of 63 flags, whose ships were involved in 30 or more inspections during the period. It is disappointing that the



performance of certain flags became worse as the number of flags in the black list increased from 13 to 15 and the number for the grey list from 16 to 17. Tanzania appeared in the black-grey-white list for the first time but as a black list flag. Belize re-joined in the black list since it failed to maintain good performance of its fleet. The white list includes 31 flags, reduced by 2 comparing with the last year.

## DEFICIENCIES

All conditions on board found not in compliance with the requirements of the relevant instruments by the port State control officers were recorded as deficiencies and requested to be rectified.



A total of 100,330 deficiencies were recorded in 2012. The deficiencies found are categorized and shown in Figure 6 and Table 6.

It has been noted that fire safety measures, safety of navigation and life-saving appliances continue to be the top three categories of deficiencies which are frequently discovered on ships. In 2012, 20,522 fire safety measures related deficiencies, 17,124 safety of navigation related deficiencies and 12,070

life-saving appliances related deficiencies were recorded, representing approximately 50% of the total number of deficiencies.

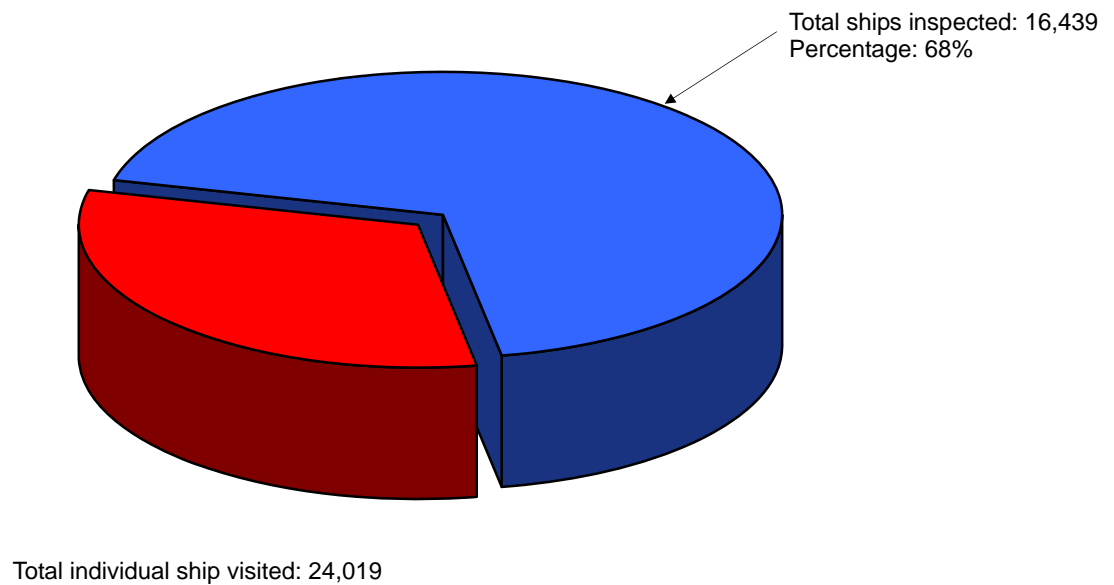
The fire safety measures related deficiencies increased by 2,408 in number or 13% in 2012. The significant rise of deficiencies on fire safety measures is a reflection of the topic of the CIC of the year.



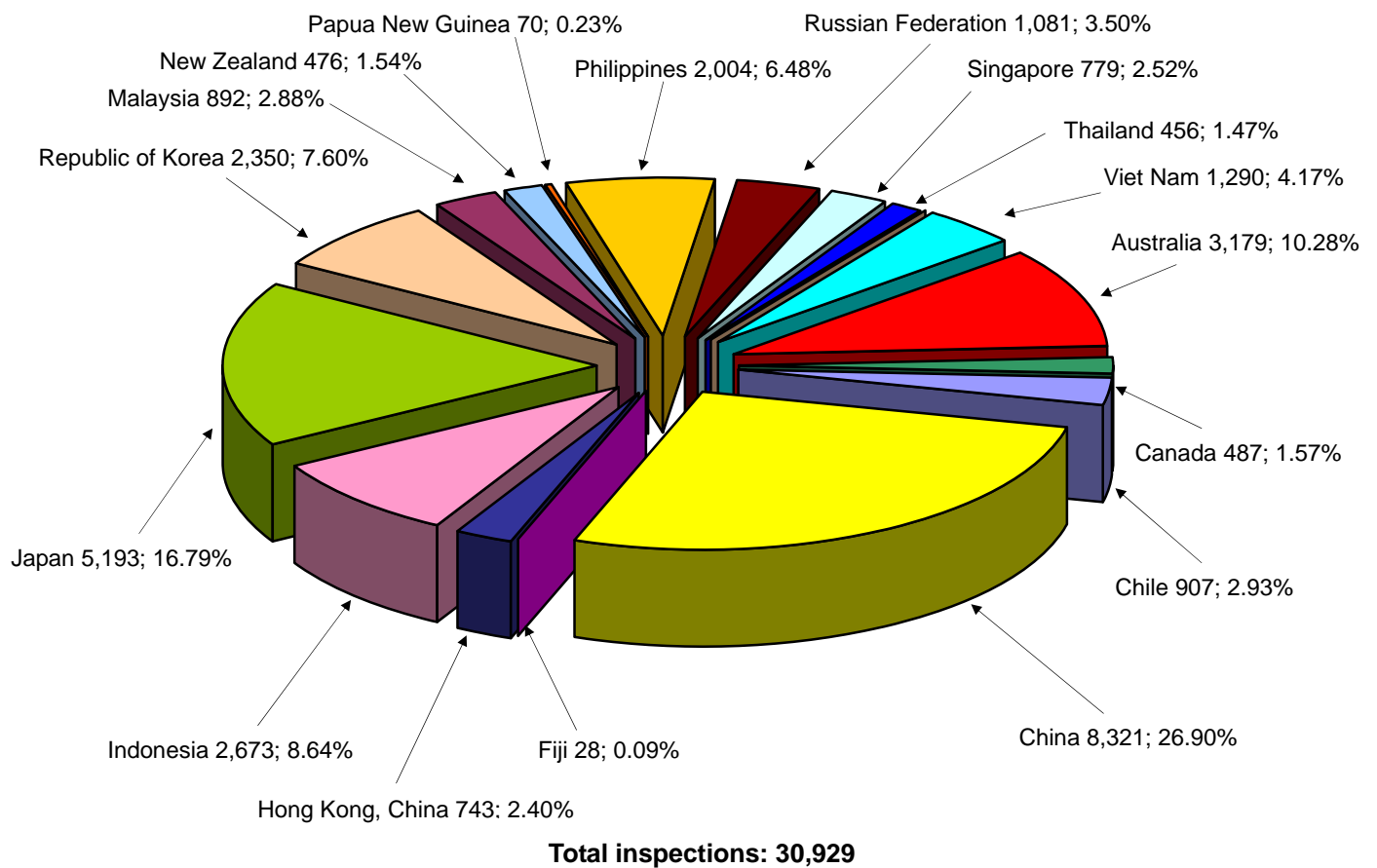
#### OVERVIEW OF PORT STATE CONTROL RESULTS 2002 – 2012

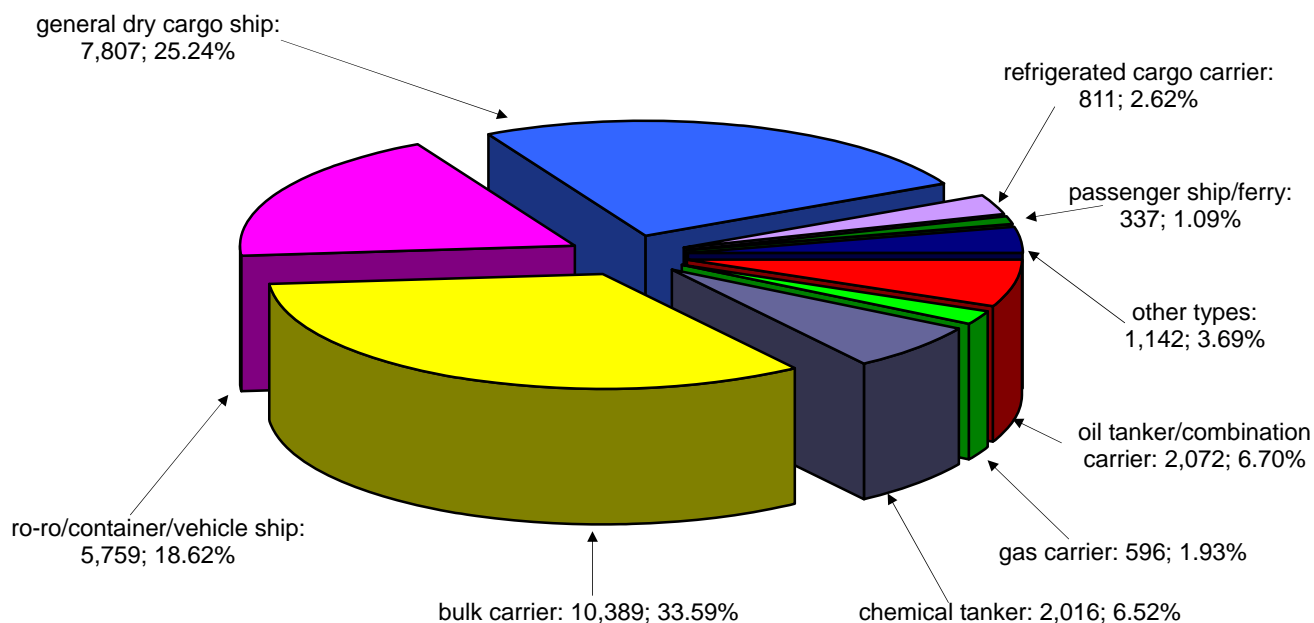
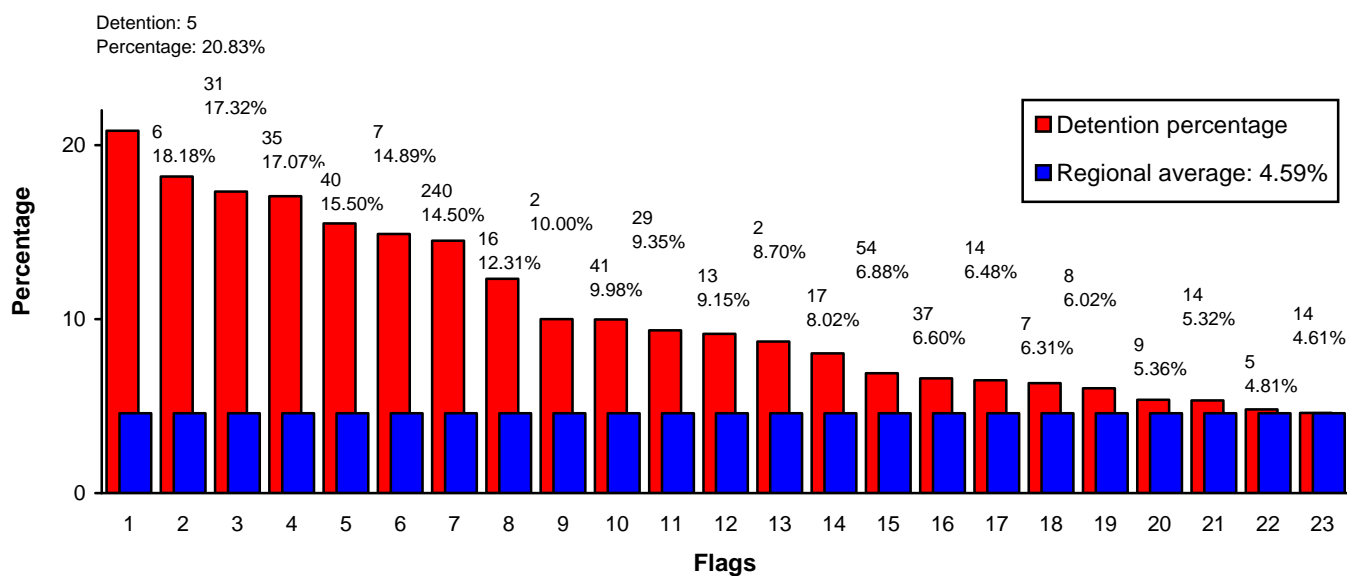
Figures 8-13 show the comparison of port State inspection results for 2002- 2012. These figures indicate the trends in port State activities and ship performance over the past eleven years.

**Figure 1: INSPECTION PERCENTAGE**



**Figure 2: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES**



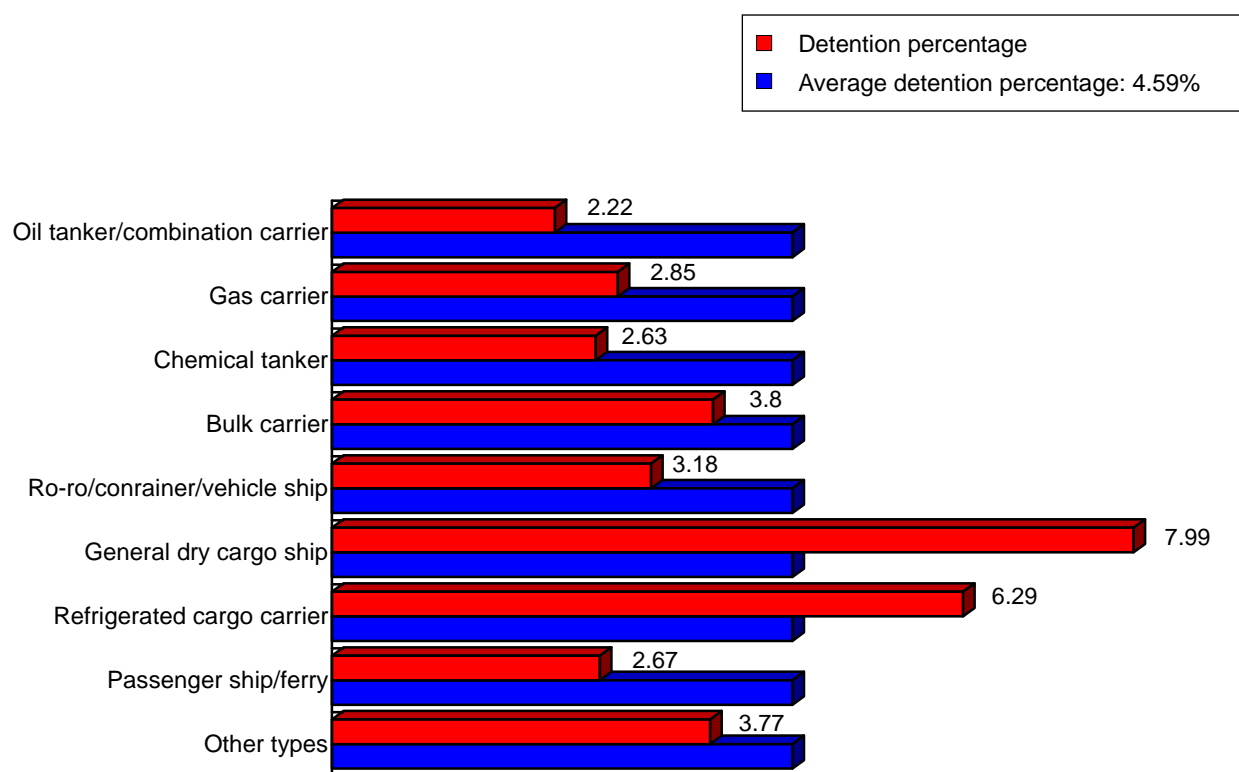
**Figure 3: TYPE OF SHIP INSPECTED****Figure 4: DETENTIONS PER FLAG****Flags:**

1. Tanzania	2. Saint Kitts and Nevis	3. Indonesia	4. Korea, Dem. People's Rep.
5. Sierra Leone	6. Bangladesh	7. Cambodia	8. Mongolia
9. Egypt	10. Belize	11. Thailand	12. Tuvalu
13. Togo	14. Kiribati	15. Viet Nam	16. Antigua and Barbuda
17. Philippines	18. India	19. Denmark	20. Italy
21. Germany	22. Taiwan, China	23. Russian Federation	

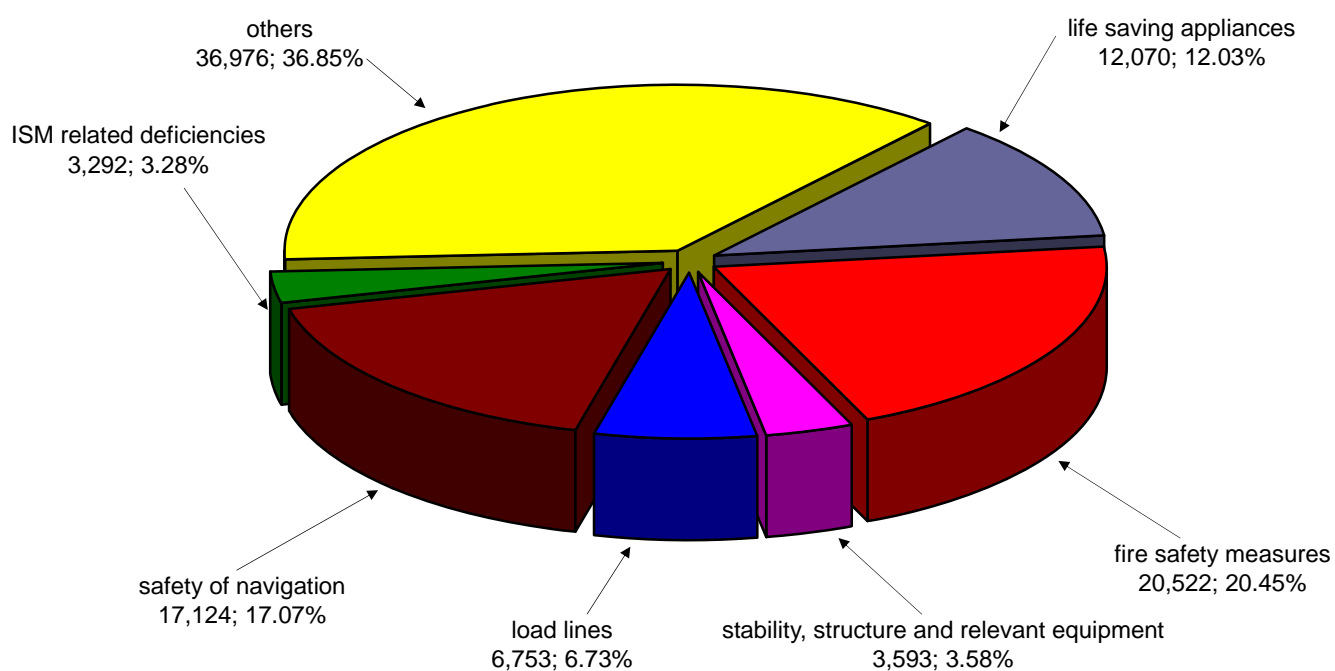
Note: Flags listed above are those flags the ships of which were involved in at least 20 port State inspections and detention percentage of which are above the regional average detention percentage. The complete information on detentions by flag is given in Table 3.

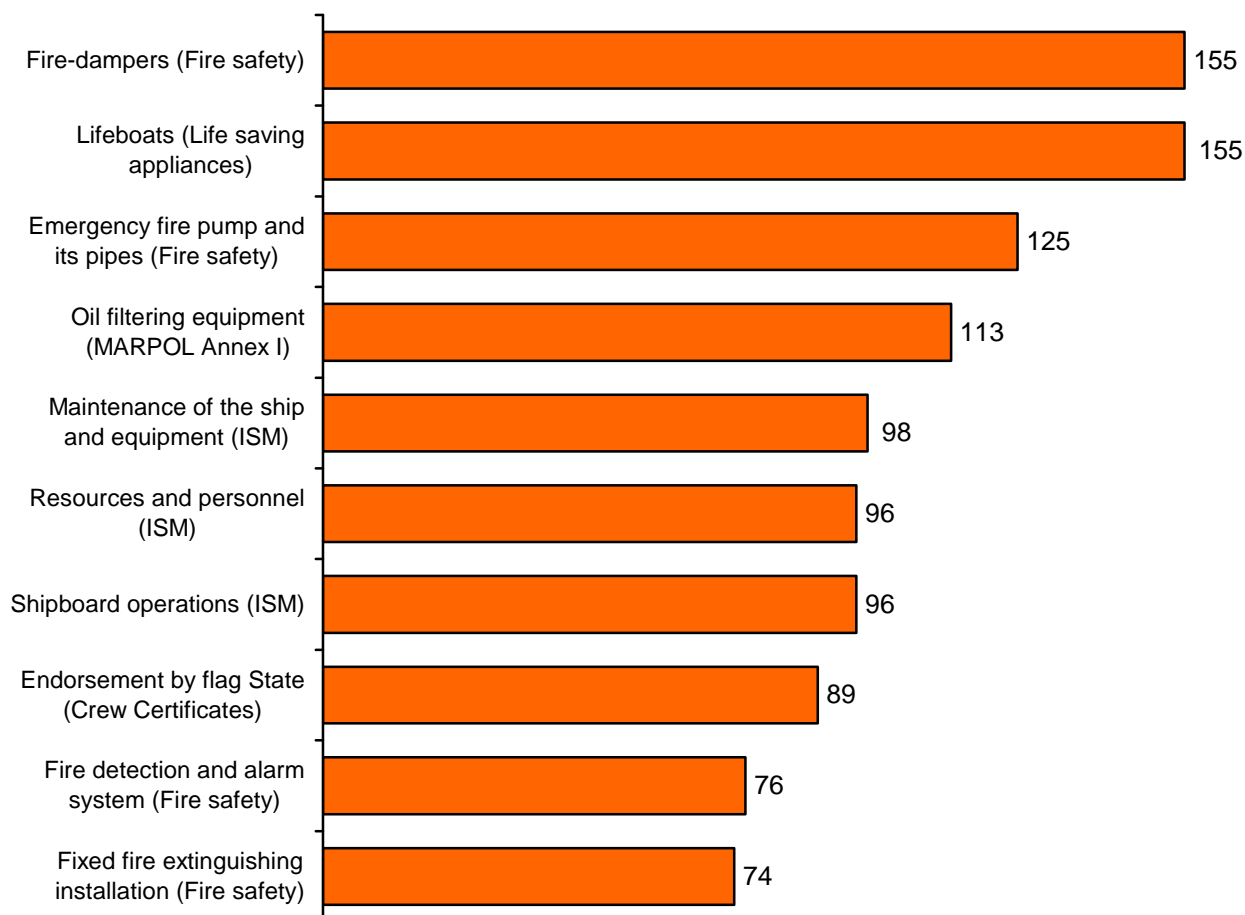


**Figure 5: DETENTION PER SHIP TYPE**



**Figure 6: DEFICIENCIES BY MAIN CATEGORIES**



**Figure 7: MOST FREQUENT DETAINABLE DEFICIENCIES**



## OVERVIEW OF PORT STATE CONTROL RESULTS 2002 - 2012

Figure 8: NO. OF INSPECTIONS

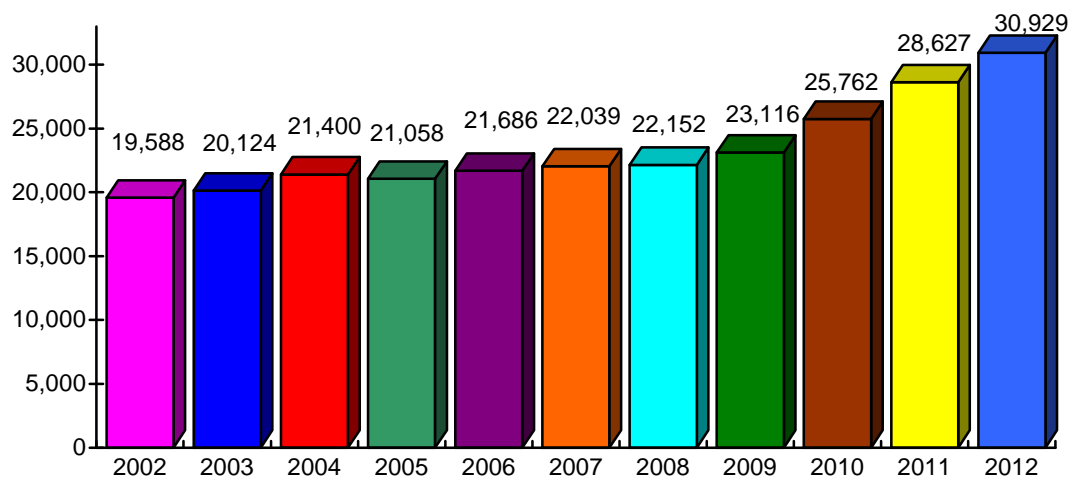


Figure 9: INSPECTION PERCENTAGE

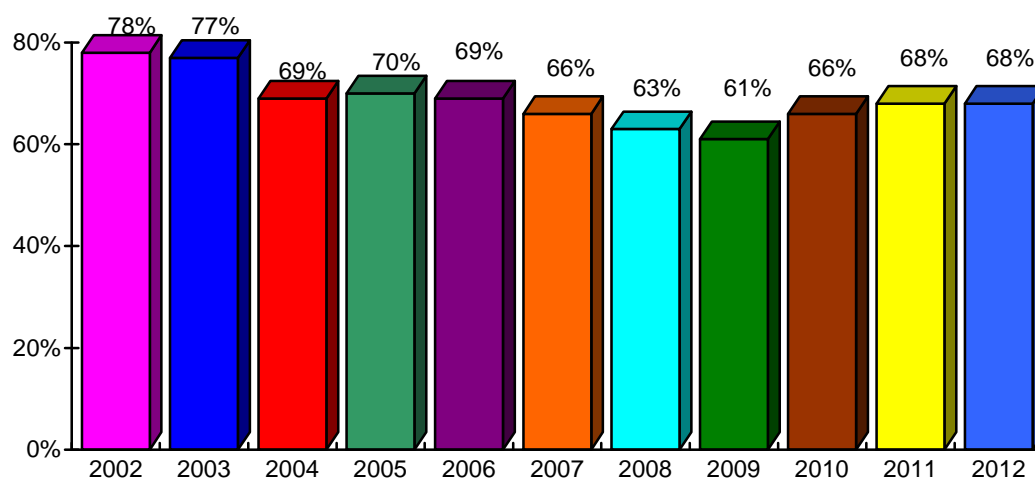
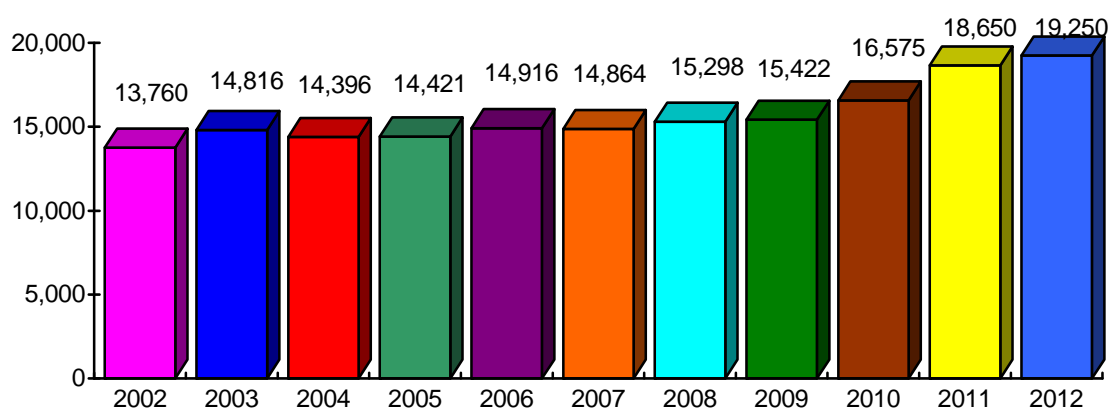
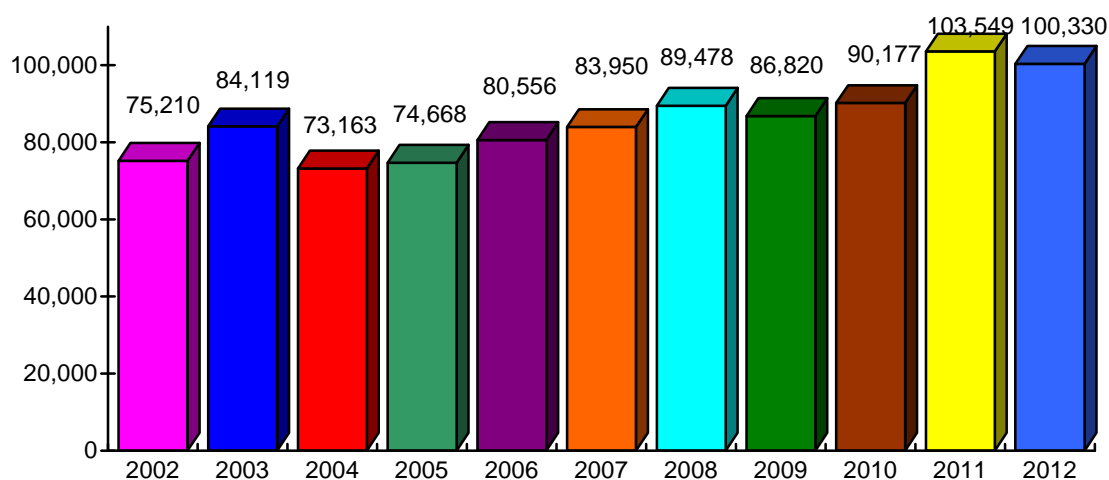


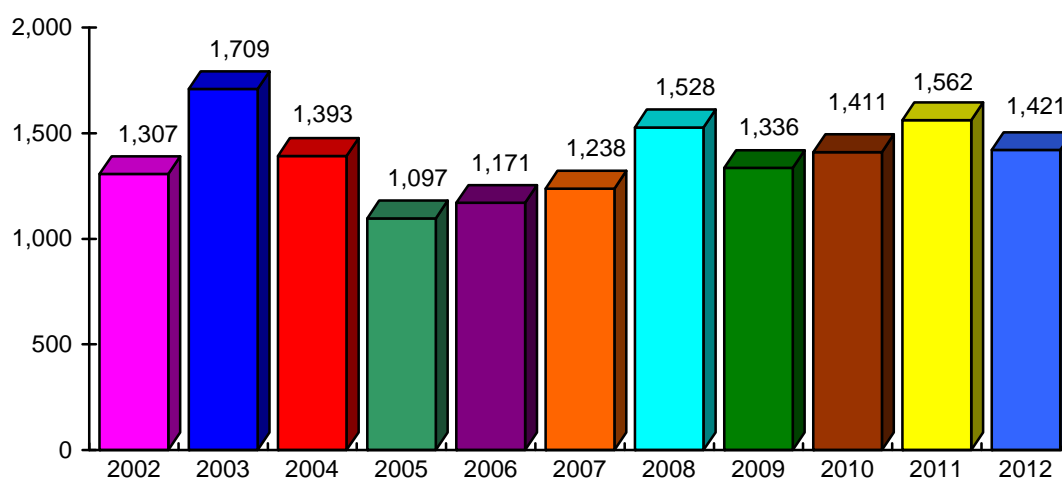
Figure 10: NO. OF INSPECTIONS WITH DEFICIENCIES



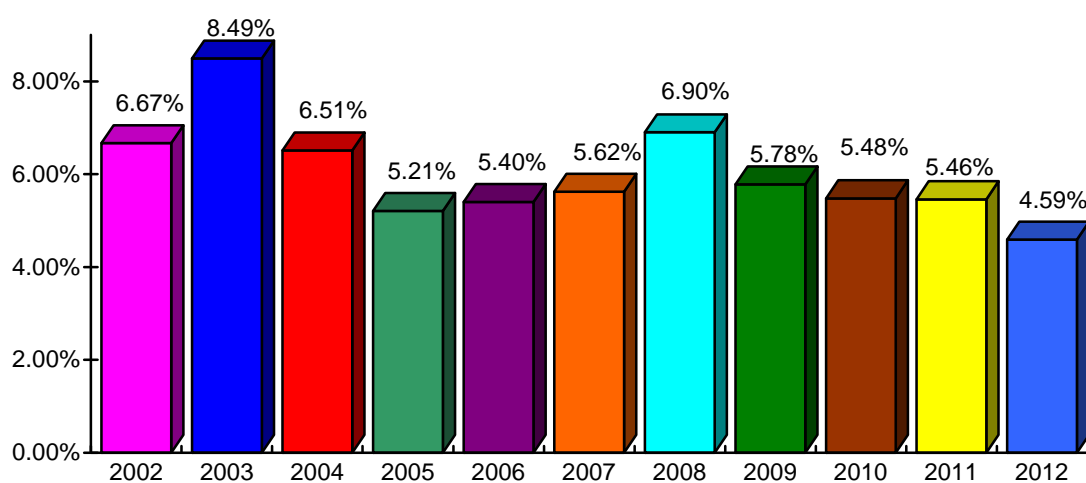
**Figure 11: NO. OF DEFICIENCIES**



**Figure 12: NO. OF DETENTIONS**



**Figure 13: 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 2012)

Authority	TONNAGE 69	LOAD LINE 66	LOAD LINE PROT 88	SOLAS 74	SOLAS PROT 78	SOLAS PROT 88	MARPOL 73/78	STCW 78	AFS 2001	COLREG 72	ILO 147**
Australia	21/05/82	29/07/68	07/02/97	17/08/83	17/08/83	07/02/97	14/10/87	07/11/83	09/01/07	29/02/80	-
Canada	18/07/94	14/01/70	08/04/10	08/05/78	-	08/04/10	16/11/92	06/11/87	08/04/10	07/03/75	25/05/93
Chile	22/11/82	10/03/75	03/03/95	28/03/80	15/07/92	29/09/95	10/10/94	09/06/87	-	02/08/77	-
China	08/04/80	05/10/73	03/02/95	07/01/80	17/12/82	03/02/95	01/07/83	08/06/81	07/03/11	07/01/80	-
Fiji	29/11/72	29/11/72	28/07/04	04/03/83	28/07/04	28/07/04	-	27/03/91	-	04/03/83	-
Hong Kong, China*	18/07/82	16/08/72	23/10/02	25/05/80	14/11/81	23/10/02	11/04/85	03/11/84	-	15/07/77	28/11/80
Indonesia	14/03/89	17/01/77	-	17/02/81	23/08/88	-	21/10/86	27/01/87	-	13/11/79	-
Japan	17/07/80	15/05/68	24/06/97	15/05/80	15/05/80	24/06/97	09/06/83	27/05/82	08/07/03	21/06/77	31/05/83
Republic of Korea	18/01/80	10/07/69	14/11/94	31/12/80	02/12/82	14/11/94	23/07/84	04/04/85	24/07/08	29/07/77	-
Malaysia	24/04/84	12/01/71	11/11/11	19/10/83	19/10/83	11/11/11	31/01/97	31/01/92	27/09/10	23/12/80	-
New Zealand	06/01/78	05/02/70	03/06/01	23/02/90	23/02/90	03/06/01	25/09/98	30/07/86	-	26/11/76	-
Papua New Guinea	25/10/93	18/05/76	-	12/11/80	-	-	25/10/93	28/10/91	-	18/05/76	-
Philippines	06/09/78	04/03/69	-	15/12/81	-	-	15/06/01	22/02/84	-	-	-
Russian Federation	20/11/69	04/07/66	18/08/00	09/01/80	12/05/81	18/08/00	03/11/83	09/10/79	19/10/12	09/11/73	07/05/91
Singapore	06/06/85	21/09/71	18/08/99	16/03/81	01/06/84	10/08/99	01/11/90	01/05/88	31/12/09	29/04/77	-
Thailand	11/06/96	30/12/92	-	18/12/84	-	-	02/11/07	19/06/97	-	06/08/79	-
Vanuatu	13/01/89	28/07/82	26/11/90	28/07/82	28/07/82	14/09/92	13/04/89	22/04/91	20/08/08	28/07/82	-
Viet Nam	18/12/90	18/12/90	27/05/02	18/12/90	12/10/92	27/05/02	29/05/91	18/12/90	-	18/12/90	-
Marshall Islands	25/04/89	26/04/88	29/11/94	26/04/88	26/04/88	16/10/95	26/04/88	25/04/89	09/05/08	26/04/88	-
Peru	16/07/82	18/01/67	24/06/09	04/12/79	16/07/82	21/08/09	25/04/80	16/07/82	-	09/01/80	06/07/04
DPR Korea	18/10/89	18/10/89	08/08/01	01/05/85	01/05/85	08/08/01	01/05/85	01/05/85	-	01/05/85	-
Macao, China	18/07/05	18/07/05	11/10/10	20/12/99	20/12/99	24/06/05	20/12/99	18/07/05	07/03/11	20/12/99	-
Solomon Islands	30/06/04	30/06/04	-	30/06/04	-	-	30/06/04	01/06/94	-	12/03/82	-
Entry into force date	18/07/82	21/07/68	03/02/00	25/05/80	01/05/81	03/02/00	02/10/83	28/04/84	17/09/08	15/07/77	28/11/81

\* 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.

**Table 1a: STATUS OF MARPOL 73/78**

(Date of deposit of instruments)

(As at 31 December 2012)

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	-	-	-	-	-
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	-
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
New Zealand	25/09/98	25/09/98	-	25/09/98	-
Papua New Guinea	25/10/93	25/10/93	25/10/93	25/10/93	-
Philippines	15/06/01	15/06/01	15/06/01	15/06/01	-
Russian Federation	03/11/83	14/08/87	14/08/87	14/08/87	-
Singapore	01/11/90	02/03/94	01/05/05	27/05/99	10/08/00
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	-	-	-	-
Marshall Islands	26/04/88	26/04/88	26/04/88	26/04/88	07/03/02
Peru	25/04/80	25/04/80	25/04/80	25/04/80	-
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
Solomon Islands	30/06/04	30/06/04	30/06/04	30/06/04	-
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 2012

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 <sup>1)</sup> (e)	No. of detentions <sup>1)</sup> (f)	No. of individual ships visited <sup>2)</sup> (g)	Inspection rate (a/g%)	Detention percentage (f/b%)
Australia <sup>3)</sup>	2,842	4,120	3,179	941	1,678	7,770	210	5,443	52.21	6.61
Canada <sup>4)</sup>	483	487	487	0	292	993	7	1,744	27.69	1.44
Chile	842	1,213	907	306	402	994	16	1,837	45.84	1.76
China	6,356	9,464	8,321	1,143	7,002	45,364	596	14,808	42.92	7.16
Fiji	26	38	28	10	2	2	0	161	16.15	0
Hong Kong, China	724	783	743	40	600	3,001	34	4,743	15.26	4.58
Indonesia	2,318	3,039	2,673	366	757	3,783	67	6,462	35.87	2.51
Japan	3,573	6,259	5,193	1,066	3,371	16,340	237	7,595	47.04	4.56
Republic of Korea	1,995	2,854	2,350	504	1,673	6,937	113	9,433	21.15	4.81
Malaysia	786	1,062	892	170	403	1,365	12	6,596	11.92	1.35
New Zealand	404	669	476	193	263	866	16	910	44.40	3.36
Papua New Guinea	68	87	70	17	24	78	0	319	21.32	0
Philippines	1,529	2,394	2,004	390	458	1,684	3	2,164	70.66	0.15
Russian Federation <sup>4)</sup>	756	2,085	1,081	1,004	771	4,184	28	1,492	50.67	2.59
Singapore	600	1,349	779	570	696	3,322	44	12,596	4.76	5.65
Thailand	372	498	456	42	99	250	1	3,583	10.38	0.22
Vanuatu	0	0	0	0	0	0	0	3	0	0
Viet Nam	1,067	1,689	1,290	399	759	3,397	37	2,508	42.54	2.87
<b>Total</b>	<b>16,439</b>	<b>38,090</b>	<b>30,929</b>	<b>7,161</b>	<b>19,250</b>	<b>100,330</b>	<b>1,421</b>	<b>Regional 24,019</b>	<b>Regional 68%</b>	<b>Regional 4.59%</b>

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

2) LLI data for 2012.

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

4) Data are only for the Pacific ports.

**Table 2a: PORT STATE INSPECTIONS ON MARITIME SECURITY**

<b>Authority</b>	<b>No. of inspections</b>	<b>No. of inspections with security related deficiencies</b>	<b>No. of security related deficiencies</b>	<b>No. of security related detentions</b>	<b>Detention percentage (%)</b>
Australia	3,179	5	5	0	0
Canada	487	4	4	0	0
Chile	907	14	14	0	0
China	8,321	804	961	18	0.22
Fiji	28	0	0	0	0
Hong Kong, China	743	130	137	2	0.27
Indonesia	2,673	20	22	0	0
Japan	5,193	328	385	1	0.02
Republic of Korea	2,350	306	510	9	0.38
Malaysia	892	37	44	2	0.22
New Zealand	476	5	5	0	0
Papua New Guinea	70	1	1	0	0
Philippines	2,004	24	24	0	0
Russian Federation	1,081	82	87	1	0.09
Singapore	779	188	200	0	0
Thailand	456	7	7	0	0
Vanuatu	0	0	0	0	0
Viet Nam	1,290	78	84	0	0
<b>Total</b>	<b>30,929</b>	<b>2,033</b>	<b>2,490</b>	<b>33</b>	<b>Regional 0.11%</b>

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 FLAG

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Antigua and Barbuda	561	365	1,614	37	6.60
Argentina	3	2	7	0	0
Australia	6	4	9	0	0
Bahamas	701	341	1,317	18	2.57
Bahrain	2	2	12	0	0
Bangladesh	47	41	272	7	14.89
Barbados	19	13	42	1	5.26
Belgium	29	15	42	1	3.45
Belize	411	375	2,742	41	9.98
Bermuda (UK)	72	37	135	2	2.78
Brazil	4	4	32	1	25.00
Brunei Darussalam	6	2	7	0	0
Cambodia	1,655	1,621	12,463	240	14.50
Canada	1	0	0	0	0
Cayman Islands (UK)	117	39	104	2	1.71
Chile	3	3	10	0	0
China	920	458	2,023	8	0.87
Comoros	8	8	57	1	12.50
Cook Islands	9	6	23	1	11.11
Croatia	25	17	92	1	4.00
Curacao	28	16	65	0	0
Cyprus	495	276	1,120	21	4.24
Denmark	133	67	259	8	6.02
Dominica	13	9	65	0	0
Ecuador	4	4	16	0	0
Egypt	20	15	94	2	10.00
Equatorial Guinea	3	3	35	1	33.33
Ethiopia	4	4	16	1	25.00
Falkland Islands (UK)	1	1	3	0	0
Finland	4	3	6	0	0
France	45	24	74	1	2.22
Georgia	3	3	29	0	0
Germany	263	183	753	14	5.32
Gibraltar (UK)	59	31	103	1	1.69
Greece	319	155	587	8	2.51
Honduras	11	11	62	1	9.09
Hong Kong, China	2,831	1,440	6,073	24	0.85
Iceland	1	1	2	0	0
India	111	57	345	7	6.31

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Indonesia	179	164	1,208	31	17.32
Iran	3	3	14	0	0
Ireland	1	0	0	0	0
Isle of Man (UK)	186	84	356	4	2.15
Israel	5	4	27	2	40.00
Italy	168	88	383	9	5.36
Jamaica	13	10	37	2	15.38
Japan	168	85	366	3	1.79
Jordan	1	0	0	0	0
Kiribati	212	180	1,380	17	8.02
Korea, Democratic People's Republic	205	204	1,993	35	17.07
Korea, Republic of	1,367	1,022	5,148	8	0.59
Kuwait	17	9	42	0	0
Lao, People's Democratic Republic	1	0	0	0	0
Liberia	2,278	1,279	5,388	88	3.86
Libyan Arab Jamahiriya	6	2	10	0	0
Lithuania	3	1	5	0	0
Luxembourg	17	7	17	1	5.88
Malaysia	234	134	784	8	3.42
Maldives	12	9	62	0	0
Malta	740	436	1,883	26	3.51
Marshall Islands	1,492	762	3,077	42	2.82
Moldova	3	3	22	0	0
Mongolia	130	118	854	16	12.31
Myanmar	5	4	26	0	0
Netherlands	156	103	392	6	3.85
New Zealand	1	1	3	0	0
Nigeria	1	1	10	0	0
Norway	260	124	482	5	1.92
Pakistan	7	4	15	0	0
Palau	1	0	0	0	0
Panama	9,189	5,646	28,847	417	4.54
Papua New Guinea	14	13	152	5	35.71
Peru	4	4	32	1	25.00
Philippines	216	145	836	14	6.48
Portugal	8	3	24	1	12.50
Qatar	4	3	16	0	0
Russian Federation	304	269	1,409	14	4.61
Saint Kitts and Nevis	33	29	212	6	18.18



Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Saint Vincent and the Grenadines	184	165	973	8	4.35
Samoa	4	3	10	0	0
Saudi Arabia	26	14	31	0	0
Sierra Leone	258	244	2,249	40	15.50
Singapore	1,901	874	3,563	28	1.47
Spain	1	1	2	0	0
Sri Lanka	8	8	28	1	12.50
Sweden	29	5	20	1	3.45
Switzerland	28	12	47	1	3.57
Taiwan, China	104	54	275	5	4.81
Tanzania	24	22	191	5	20.83
Thailand	310	227	1,432	29	9.35
Togo	23	22	165	2	8.70
Tonga	12	11	62	1	8.33
Tunisia	1	1	2	0	0
Turkey	51	26	110	2	3.92
Tuvalu	142	119	765	13	9.15
Ukraine	1	1	5	0	0
United Arab Emirates (UAE)	3	2	3	0	0
United Kingdom (UK)	262	146	506	11	4.20
United States	62	36	136	2	3.23
Vanuatu	115	81	373	4	3.48
Viet Nam	785	564	3,130	54	6.88
Ship's registration withdrawn	4	3	30	3	75.00
<b>Total</b>	<b>30,929</b>	<b>19,250</b>	<b>100,330</b>	<b>1,421</b>	<b>Regional 4.59</b>

Table 4: 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	54	29	126	3	5.56
Combination carrier	45	17	65	2	4.44
Oil tanker	1,973	820	3,552	41	2.08
Gas carrier	596	299	1,437	17	2.85
Chemical tanker	2,016	1,088	5,179	53	2.63
Bulk carrier	10,389	5,825	28,028	395	3.80
Vehicle carrier	876	345	1,028	10	1.14
Container ship	4,685	2,835	11,549	154	3.29
Ro-Ro cargo ship	198	151	963	19	9.60
General cargo/multi-purpose ship	7,807	6,327	40,881	624	7.99
Refrigerated cargo carrier	811	576	2,844	51	6.29
Woodchip carrier	245	145	553	6	2.45
Livestock carrier	45	31	200	3	6.67
Ro-Ro passenger ship	90	78	549	4	4.44
Passenger ship	247	155	794	5	2.02
Factory ship	2	1	2	0	0
Heavy load carrier	108	69	285	7	6.48
Offshore service vessel	157	77	412	6	3.82
MODU & FPSO	5	4	30	0	0
High speed passenger craft	26	23	71	1	3.85
Special purpose ship	54	25	115	2	3.70
Tugboat	220	133	663	4	1.82
Others	280	197	1,004	14	5.00
<b>Total</b>	<b>30,929</b>	<b>19,250</b>	<b>100,330</b>	<b>1,421</b>	<b>4.59</b>

Table 5: 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%
American Bureau of Shipping	3,160	96	6	3.04	0.19	6.25
Belize Maritime Bureau Inc.	5	0	0	0	0	0
Biro Klasifikasi Indonesia	101	21	2	20.79	1.98	9.52
Bulgarski Koraben Registar	2	0	0	0	0	0
Bureau Securitas	14	1	0	7.14	0	0
Bureau Veritas	3,234	148	10	4.58	0.31	6.76
Ceskoslovensky Lodin Register	2	0	0	0	0	0
China Classification Society	2,797	29	1	1.04	0.04	3.45
China Corporation Register of Shipping	321	21	0	6.54	0	0
Compania Nacional de Registro e Inspeccion de Naves	1	0	0	0	0	0
Cosmos Marine Bureau	11	1	0	9.09	0	0
Croatian Register of Shipping	34	1	1	2.94	2.94	100.00
Cyprus Bureau of Shipping	4	0	0	0	0	0
Det Norske Veritas	3,552	84	5	2.36	0.14	5.95
Ferriby Marine	2	0	0	0	0	0
Fidenavis SA	12	1	0	8.33	0	0
Germanischer Lloyd	3,287	153	7	4.65	0.21	4.58
Global Marine Bureau	469	74	8	15.78	1.71	10.81
Global Shipping Bureau	8	2	1	25.00	12.50	50.00
Hellenic Register of Shipping	1	0	0	0	0	0
Honduras Bureau of Shipping	1	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	2	0	0	0	0	0
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	41	6	0	14.63	0	0
Indian Register of Shipping	110	7	0	6.36	0	0
Intermaritime Certification Services, S.A.	393	30	7	7.63	1.78	23.33
International Naval Surveys Bureau	67	6	1	8.96	1.49	16.67
International Register of Shipping	331	47	2	14.20	0.60	4.26
International Ship Classification	299	29	5	9.70	1.67	17.24
Isthmus Bureau of Shipping	509	58	10	11.39	1.96	17.24
Korea Classification Society (former Joson Classification Society)	223	35	3	15.70	1.35	8.57
Korea Ship Safety Technology Authority	44	0	0	0	0	0
Korean Register of Shipping	2,763	48	1	1.74	0.04	2.08
Lloyd's Register	3,804	104	5	2.73	0.13	4.81
Macosnar Corporation	14	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%
Marconi International Marine Company Ltd.	3	0	0	0	0	0
Maritime Lloyd Ltd, Georgia	17	0	0	0	0	0
Maritime Technical Systems and Services	34	2	0	5.88	0	0
National Cargo Bureau Inc.	1	0	0	0	0	0
National Shipping Adjusters Inc	39	5	0	12.82	0	0
New United International Marine Services Ltd	7	0	0	0	0	0
Nippon Kaiji Kyokai	9,538	327	11	3.43	0.12	3.36
Overseas Marine Certification Services	299	37	2	12.37	0.67	5.41
Panama Bureau of Shipping	35	3	0	8.57	0	0
Panama Marine Survey and Certification Services, Inc.	2	1	0	50.00	0	0
Panama Maritime Documentation Services	498	44	1	8.84	0.20	2.27
Panama Maritime Surveyors Bureau Inc	13	2	0	15.38	0	0
Panama Register Corporation	44	6	0	13.64	0	0
Panama Shipping Certificate Inc.	2	0	0	0	0	0
Panama Shipping Registrar Inc.	143	17	2	11.89	1.40	11.76
Phoenix Register of Shipping	3	1	0	33.33	0	0
Polski Rejestr Statkow	17	0	0	0	0	0
Registro Brasileiro de Navios de Aeronaves	1	0	0	0	0	0
Registro Internacional Naval S.A.	15	1	0	6.67	0	0
Registro Italiano Navale	753	29	0	3.85	0	0
RINAVE Portuguesa	11	1	0	9.09	0	0
Russian Maritime Register of Shipping	498	27	0	5.42	0	0
Ship Classification Malaysia	6	0	0	0	0	0
Shipping Register of Ukraine	1	0	0	0	0	0
SingClass International Pte Ltd	15	2	0	13.33	0	0
Sing-Lloyd	31	4	2	12.90	6.45	50.00
Turkish Lloyd	3	0	0	0	0	0
Union Bureau of Shipping	1,061	149	17	14.04	1.60	11.41
Universal Maritime Bureau	270	33	4	12.22	1.48	12.12
Universal Shipping Bureau	81	13	1	16.05	1.23	7.69
Vietnam Register	824	55	4	6.67	0.49	7.27
Other	368	50	4	13.59	1.09	8.00

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 6: DEFICIENCIES BY CATEGORIES

Nature of deficiencies		No. of deficiencies
Certificate & Documentation	Crew Certificates	1,275
	Documents	5,359
	Ship Certificates	2,754
Structural Conditions		3,593
Water/Weathertight conditions		6,753
Emergency Systems		5,628
Radio Communications		2,987
Cargo operations including equipment		675
Fire safety		20,522
Alarms		798
Working and Living Conditions	Living Conditions	672
	Working Conditions	4,496
Safety of Navigation		17,124
Life saving appliances		12,070
Dangerous goods		241
Propulsion and auxiliary machinery		5,470
Pollution prevention	Anti Fouling	16
	MARPOL Annex I	2,335
	MARPOL Annex II	27
	MARPOL Annex III	17
	MARPOL Annex IV	1,013
	MARPOL Annex V	981
	MARPOL Annex VI	796
ISM		3,292
Other		1,436
<b>Total</b>		<b>100,330</b>
ISPS		2,490
<b>Grand total</b>		<b>102,820</b>

## SUMMARY OF PORT STATE INSPECTION DATA 2010 – 2012

Table 7: BLACK – GREY – WHITE LISTS \*

Flag	Inspections 2010-2012	Detentions 2010-2012	Black to Grey Limit	Grey to White Limit	Excess Factor
<b>BLACK LIST</b>					
Papua New Guinea	36	11	6		4.84
Sierra Leone	708	127	61		3.87
Cambodia	5,131	814	390		3.68
Georgia	109	23	13		3.67
Korea, Democratic People's Republic	513	90	46		3.62
Tanzania	38	9	6		3.10
Mongolia	416	60	38		2.57
Indonesia	577	80	51		2.53
Saint Kitts and Nevis	152	24	16		2.42
Bangladesh	94	15	11		2.09
Tonga	38	7	6		1.79
Kiribati	570	63	50		1.67
Thailand	1,017	102	85		1.52
Viet Nam	2,163	200	171		1.42
Belize	1,117	96	93		1.09
<b>GREY LIST</b>					
Barbados	72	8	9	1	0.86
Tuvalu	421	35	39	20	0.80
Dominica	47	5	7	0	0.75
Egypt	49	5	7	0	0.73
Luxembourg	44	3	6	0	0.49
Turkey	176	11	18	6	0.39
Myanmar	39	2	6	0	0.38
Togo	40	2	6	0	0.37
Belgium	91	5	11	2	0.35
Curacao	66	3	9	1	0.29
Gibraltar (UK)	171	9	18	6	0.25
Kuwait	41	1	6	0	0.21
Switzerland	71	2	9	1	0.13
Antigua and Barbuda	1,647	102	133	98	0.12
Saudi Arabia	58	1	8	0	0.09
Croatia	84	2	10	2	0.05
India	336	16	32	15	0.04
<b>WHITE LIST</b>					
Maldives	33	0		0	0

Flag	Inspections 2010-2012	Detentions 2010-2012	Black to Grey Limit	Grey to White Limit	Excess Factor
Philippines	644	33		34	-0.06
Taiwan, China	255	10		11	-0.11
Italy	457	21		23	-0.13
Sweden	79	1		1	-0.20
Cyprus	1,495	76		88	-0.29
Netherlands	436	18		21	-0.29
Malta	2,001	94		121	-0.48
Saint Vincent and the Grenadines	687	27		37	-0.53
Malaysia	755	29		41	-0.59
United States	153	3		5	-0.60
Russian Federation	900	35		50	-0.62
Panama	25,833	1,267		1740	-0.62
Denmark	393	12		19	-0.68
United Kingdom (UK)	767	25		42	-0.82
Germany	820	27		45	-0.82
France	146	2		5	-0.83
Liberia	6,055	239		391	-0.87
Vanuatu	335	8		15	-0.88
Greece	943	29		53	-0.93
Cayman Islands (UK)	296	6		13	-0.97
Marshall Islands	3,524	114		221	-1.08
Bermuda (UK)	213	3		8	-1.08
Isle of Man (UK)	435	9		21	-1.12
Bahamas	1,976	57		119	-1.14
Norway	715	17		38	-1.14
Singapore	4,945	110		316	-1.47
Japan	429	5		21	-1.52
Hong Kong, China	6,855	89		445	-1.82
Korea, Republic of	3,858	45		243	-1.84
China	2,303	17		141	-1.96

- 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 51.

$p=7\%$

$Z_{95\%}=1.645$

$q=3\%$

Table 8: INSPECTIONS AND DETENTIONS PER FLAG

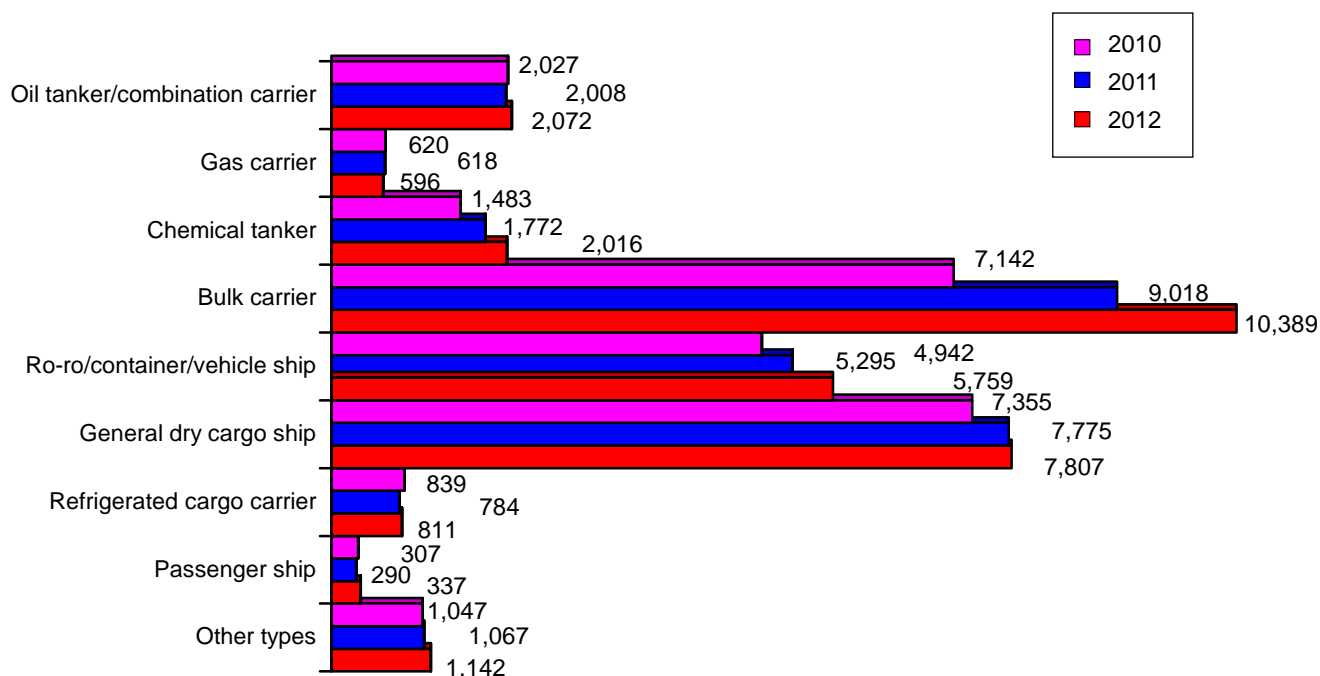
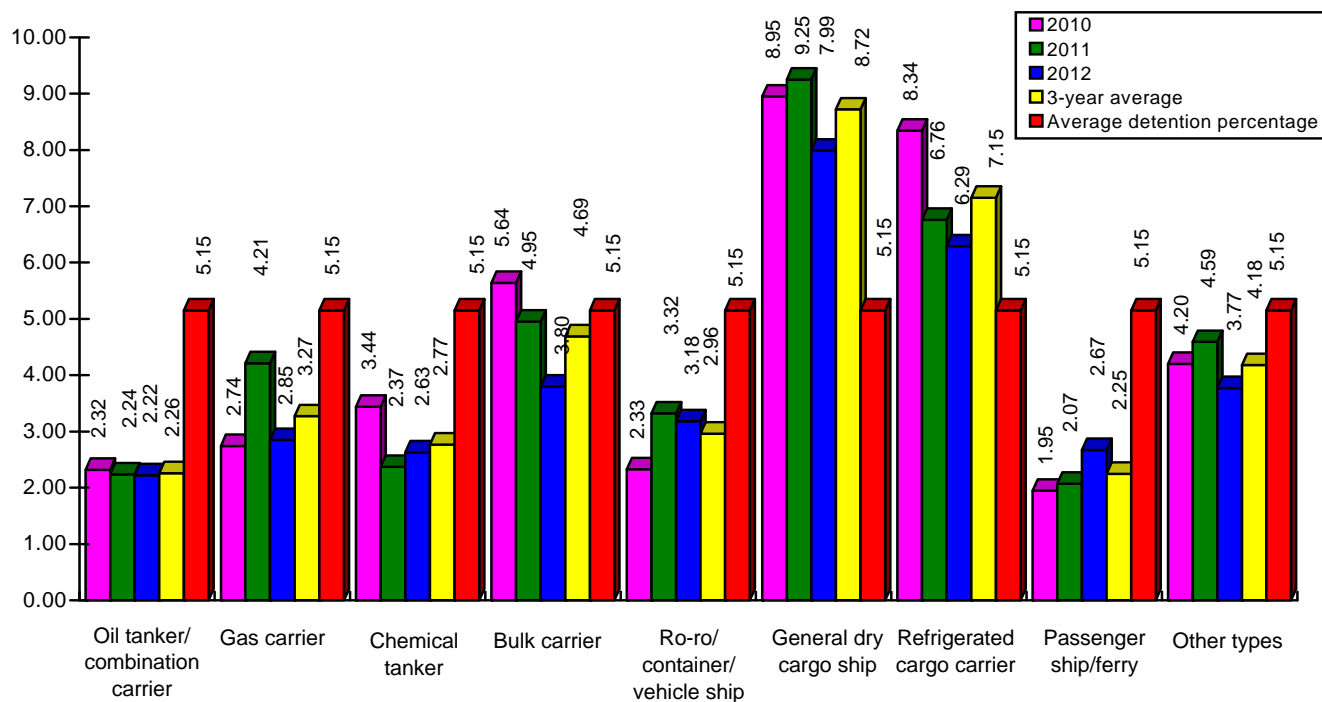
Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2010	2011	2012	Total	2010	2011	2012	Total	
Algeria	5	3	0	8	0	1	0	1	12.50
Antigua and Barbuda	541	545	561	1,647	24	41	37	102	6.19
Argentina	6	3	3	12	0	0	0	0	0
Australia	9	7	6	22	0	0	0	0	0
Bahamas	610	665	701	1,976	15	24	18	57	2.88
Bahrain	2	1	2	5	0	0	0	0	0
Bangladesh	14	33	47	94	4	4	7	15	15.96
Barbados	23	30	19	72	4	3	1	8	11.11
Belgium	23	39	29	91	2	2	1	5	5.49
Belize	358	348	411	1,117	34	21	41	96	8.59
Bermuda (UK)	68	73	72	213	0	1	2	3	1.41
Bolivia	3	1	0	4	1	0	0	1	25.00
Brazil	4	3	4	11	1	1	1	3	27.27
Brunei Darussalam	7	5	6	18	0	0	0	0	0
Bulgaria	4	1	0	5	1	0	0	1	20.00
Cambodia	1,649	1,827	1,655	5,131	266	308	240	814	15.86
Canada	0	0	1	1	0	0	0	0	0
Cayman Islands (UK)	84	95	117	296	2	2	2	6	2.03
Chile	0	1	3	4	0	0	0	0	0
China	676	707	920	2,303	8	1	8	17	0.74
Comoros	9	12	8	29	3	2	1	6	20.69
Cook Islands	12	6	9	27	0	0	1	1	3.70
Croatia	31	28	25	84	1	0	1	2	2.38
Curacao	15	23	28	66	1	2	0	3	4.55
Cyprus	500	500	495	1,495	27	28	21	76	5.08
Denmark	132	128	133	393	1	3	8	12	3.05
Dominica	20	14	13	47	3	2	0	5	10.64
Ecuador	2	2	4	8	0	1	0	1	12.50
Egypt	11	18	20	49	1	2	2	5	10.20
Equatorial Guinea	0	3	3	6	0	0	1	1	16.67
Ethiopia	6	7	4	17	0	1	1	2	11.76
Falkland Islands (UK)	0	3	1	4	0	0	0	0	0
Fiji	0	1	0	1	0	0	0	0	0
Finland	0	0	4	4	0	0	0	0	0
France	54	47	45	146	1	0	1	2	1.37



Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2010	2011	2012	Total	2010	2011	2012	Total	
Georgia	67	39	3	109	14	9	0	23	21.10
Germany	279	278	263	820	5	8	14	27	3.29
Gibraltar (UK)	61	51	59	171	5	3	1	9	5.26
Greece	291	333	319	943	10	11	8	29	3.08
Honduras	1	1	11	13	0	0	1	1	7.69
Hong Kong, China	1,765	2,259	2,831	6,855	29	36	24	89	1.30
Iceland	0	0	1	1	0	0	0	0	0
India	101	124	111	336	2	7	7	16	4.76
Indonesia	205	193	179	577	25	24	31	80	13.86
Iran	5	5	3	13	0	0	0	0	0
Ireland	0	3	1	4	0	0	0	0	0
Isle of Man (UK)	107	142	186	435	2	3	4	9	2.07
Israel	5	5	5	15	0	0	2	2	13.33
Italy	137	152	168	457	7	5	9	21	4.6
Jamaica	2	5	13	20	1	0	2	3	15
Japan	107	154	168	429	2	0	3	5	1.17
Jordan	1	0	1	2	0	0	0	0	0
Kiribati	193	165	212	570	28	18	17	63	11.05
Korea, Democratic People's Republic	140	168	205	513	15	40	35	90	17.54
Korea, Republic of	1,179	1,312	1,367	3,858	23	14	8	45	1.17
Kuwait	11	13	17	41	0	1	0	1	2.44
Lao, People's Democratic Republic	0	0	1	1	0	0	0	0	0
Latvia	1	0	0	1	0	0	0	0	0
Liberia	1,758	2,019	2,278	6,055	66	85	88	239	3.95
Libyan Arab Jamahiriya	7	1	6	14	0	0	0	0	0
Lithuania	5	1	3	9	1	0	0	1	11.11
Luxembourg	9	18	17	44	1	1	1	3	6.82
Malaysia	239	282	234	755	9	12	8	29	3.84
Maldives	10	11	12	33	0	0	0	0	0
Malta	554	707	740	2,001	29	39	26	94	4.7
Marshall Islands	923	1,109	1,492	3,524	32	40	42	114	3.23
Mauritius	0	2	0	2	0	0	0	0	0
Mexico	0	1	0	1	0	0	0	0	0
Moldova	2	6	3	11	0	0	0	0	0
Mongolia	150	136	130	416	28	16	16	60	14.42
Myanmar	19	15	5	39	1	1	0	2	5.13

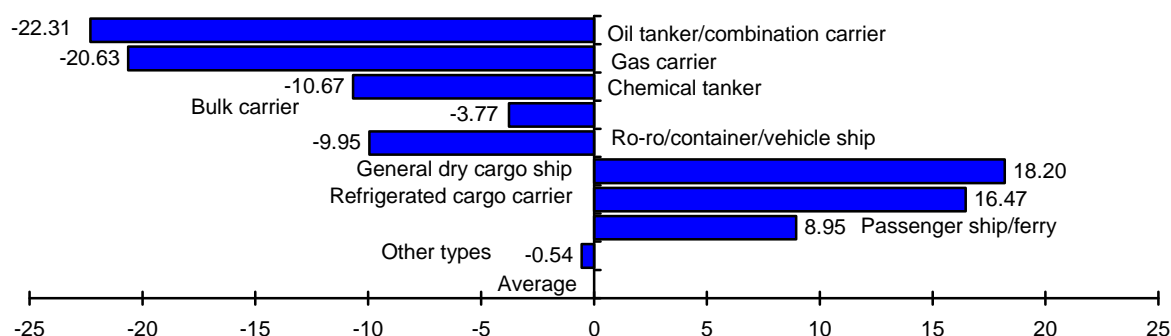
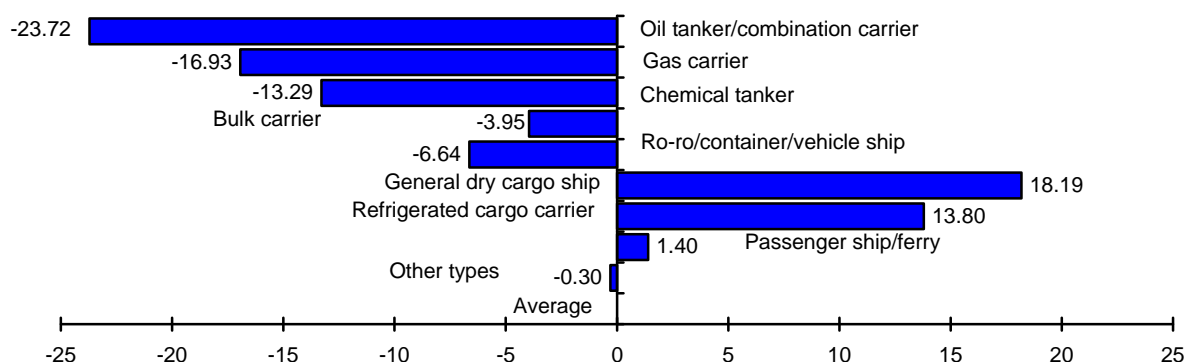
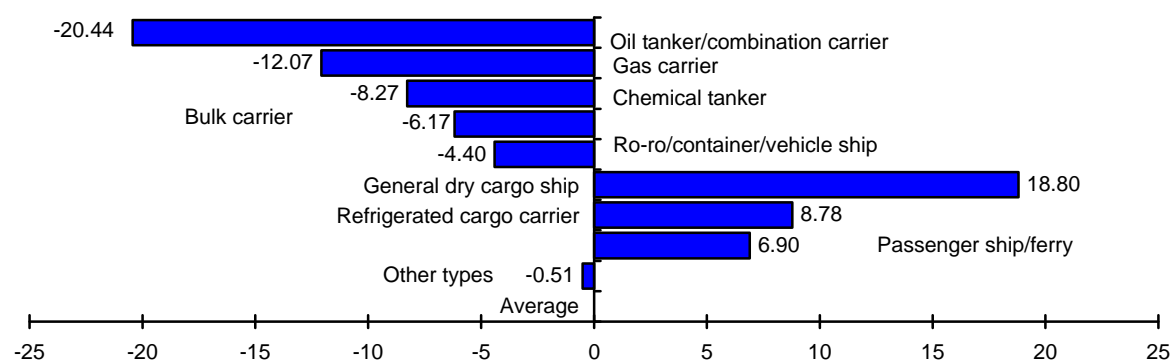
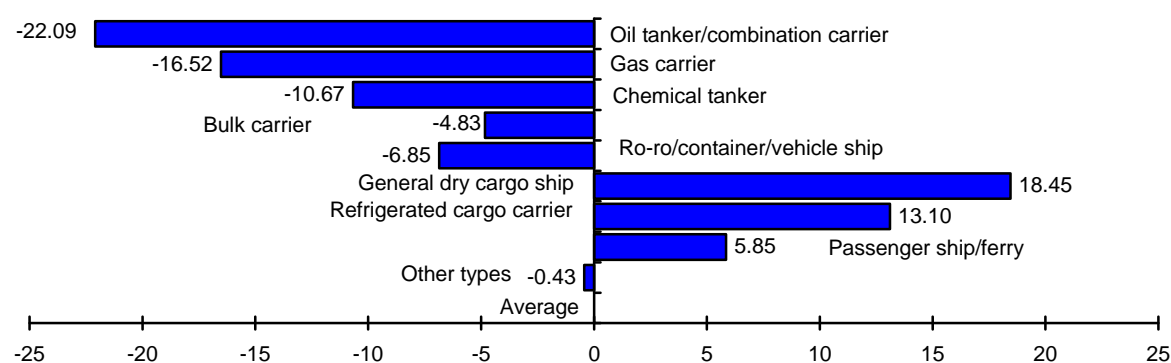
Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2010	2011	2012	Total	2010	2011	2012	Total	
Netherlands	141	139	156	436	8	4	6	18	4.13
New Zealand	2	2	1	5	0	0	0	0	0
Nigeria	1	0	1	2	0	0	0	0	0
Norway	228	227	260	715	5	7	5	17	2.38
Pakistan	6	7	7	20	0	0	0	0	0
Palau	0	0	1	1	0	0	0	0	0
Panama	7,952	8,692	9,189	25,833	418	432	417	1,267	4.90
Papua New Guinea	12	10	14	36	4	2	5	11	30.56
Peru	1	1	4	6	0	0	1	1	16.67
Philippines	213	215	216	644	8	11	14	33	5.12
Poland	1	0	0	1	0	0	0	0	0
Portugal	7	6	8	21	1	0	1	2	9.52
Qatar	10	5	4	19	0	0	0	0	0
Romania	0	1	0	1	0	0	0	0	0
Russian Federation	320	276	304	900	12	9	14	35	3.89
Saint Helena (UK)	0	1	0	1	0	0	0	0	0
Saint Kitts and Nevis	64	55	33	152	11	7	6	24	15.79
Saint Vincent and the Grenadines	265	238	184	687	11	8	8	27	3.93
Samoa	7	2	4	13	0	0	0	0	0
Saudi Arabia	12	20	26	58	1	0	0	1	1.72
Seychelles	2	0	0	2	0	0	0	0	0
Sierra Leone	167	283	258	708	35	52	40	127	17.94
Singapore	1,380	1,664	1,901	4,945	38	44	28	110	2.22
Slovakia	3	0	0	3	1	0	0	1	33.33
Solomon Islands	3	1	0	4	0	0	0	0	0
Spain	1	4	1	6	0	0	0	0	0
Sri Lanka	7	7	8	22	0	0	1	1	4.55
Sweden	30	20	29	79	0	0	1	1	1.27
Switzerland	22	21	28	71	0	1	1	2	2.82
Syrian Arab Republic	1	0	0	1	0	0	0	0	0
Taiwan, China	68	83	104	255	2	3	5	10	3.92
Tanzania	3	11	24	38	2	2	5	9	23.68
Thailand	349	358	310	1,017	35	38	29	102	10.03
Togo	8	9	23	40	0	0	2	2	5
Tonga	14	12	12	38	1	5	1	7	18.42
Tunisia	2	1	1	4	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2010	2011	2012	Total	2010	2011	2012	Total	
Turkey	60	65	51	176	6	3	2	11	6.25
Tuvalu	160	119	142	421	14	8	13	35	8.31
Ukraine	1	2	1	4	0	0	0	0	0
United Arab Emirates (UAE)	6	5	3	14	0	0	0	0	0
United Kingdom (UK)	236	269	262	767	4	10	11	25	3.26
United States	38	53	62	153	0	1	2	3	1.96
Vanuatu	104	116	115	335	3	1	4	8	2.39
Viet Nam	640	738	785	2,163	55	91	54	200	9.25
Ship's registration withdrawn	3	0	4	7	1	0	3	4	57.14
<b>Total</b>	<b>25,762</b>	<b>28,627</b>	<b>30,929</b>	<b>85,318</b>	<b>1,411</b>	<b>1,562</b>	<b>1,421</b>	<b>4,394</b>	<b>5.15</b>

**Figure 14: COMPARISON OF INSPECTIONS PER SHIP TYPE****Figure 15: COMPARISON OF DETENTIONS PER SHIP TYPE**

**Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE**

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2010	2011	2012	Total	2010	2011	2012	Total	
NLS tanker	85	99	54	238	0	2	3	5	2.10
Combination carrier	107	73	45	225	5	2	2	9	4.00
Oil tanker	1835	1836	1973	5,644	42	41	41	124	2.20
Gas carrier	620	618	596	1,834	17	26	17	60	3.27
Chemical tanker	1483	1772	2016	5,271	51	42	53	146	2.77
Bulk carrier	7142	9018	10389	26,549	403	446	395	1,244	4.69
Vehicle carrier	746	668	876	2,290	16	11	10	37	1.62
Container ship	3963	4421	4685	13,069	92	151	154	397	3.04
Ro-Ro cargo ship	233	206	198	637	7	14	19	40	6.28
General cargo/multi-purpose ship	7355	7775	7807	22,937	658	719	624	2,001	8.72
Refrigerated cargo carrier	839	784	811	2,434	70	53	51	174	7.15
Woodchip carrier	220	235	245	700	7	12	6	25	3.57
Livestock carrier	53	50	45	148	2	7	3	12	8.11
Ro-Ro Passenger ship	83	92	90	265	4	5	4	13	4.91
Passenger ship	224	198	247	669	2	1	5	8	1.20
Factory ship	1	1	2	4	0	0	0	0	0
Heavy load carrier	61	79	108	248	3	3	7	13	5.24
Offshore service vessel	149	115	157	421	9	3	6	18	4.28
MODU & FPSO	11	4	5	20	0	1	0	1	5.00
High speed passenger craft	57	42	26	125	0	0	1	1	0.80
Special purpose ship	40	49	54	143	0	0	2	2	1.40
Tugboat	212	222	220	654	12	8	4	24	3.67
Others	243	270	280	793	11	15	14	40	5.04
<b>Total</b>	<b>25,762</b>	<b>28,627</b>	<b>30,929</b>	<b>85,318</b>	<b>1,411</b>	<b>1,562</b>	<b>1,421</b>	<b>4,394</b>	<b>5.15</b>

**Figure 16: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE****(a) Year 2010****(b) Year 2011****(c) Year 2012****(d) 3-year summary**

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

**Table 10: INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE**

Type of ship	Number of inspections				Number of inspections with deficiencies				3-year average percentage %
	2010	2011	2012	Total	2010	2011	2012	Total	
Oil tanker/combination carrier	2,027	2,008	2,072	6,107	852	832	866	2,550	41.76
Gas carrier	620	618	596	1,834	271	298	299	868	47.33
Chemical tanker	1,483	1,772	2,016	5,271	796	919	1,088	2,803	53.18
Bulk carrier	7,142	9,018	10,389	26,549	4,326	5,519	5,825	15,670	59.02
Ro-ro/container/vehicle ship	4,942	5,295	5,759	15,996	2,688	3,098	3,331	9,117	57.00
General dry cargo ship	7,355	7,775	7,807	22,937	6,071	6,480	6,327	18,878	82.30
Refrigerated cargo carrier	839	784	811	2,434	678	619	576	1,873	76.95
Passenger ship	307	290	337	934	225	193	233	651	69.70
Other types	1,047	1,067	1,142	3,256	668	692	705	2,065	63.42
<b>Total</b>	<b>25,762</b>	<b>28,627</b>	<b>30,929</b>	<b>85,318</b>	<b>16,575</b>	<b>18,650</b>	<b>19,250</b>	<b>54,475</b>	<b>63.85</b>



Table 11: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2010-2012	No. of overall detentions 2010-2012	No. of RO responsible detentions 2010-2012	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
American Bureau of Shipping	8,173	257	15	3.14	0.18	5.84
Belize Maritime Bureau Inc.	13	1	0	7.69	0	0
Belize Register Corporation	1	0	0	0	0	0
Biro Klasifikasi Indonesia	296	53	3	17.91	1.01	5.66
Bulgarski Koraben Registar	4	0	0	0	0	0
Bureau Securitas	24	1	0	4.17	0	0
Bureau Veritas	8,570	418	18	4.88	0.21	4.31
Ceskoslovensky Lodin Register	6	0	0	0	0	0
China Classification Society	7,363	82	3	1.11	0.04	3.66
China Corporation Register of Shipping	972	76	2	7.82	0.21	2.63
Compania Nacional de Registro e Inspeccion de Naves	1	0	0	0	0	0
Cosmos Marine Bureau	50	3	0	6.00	0	0
Croatian Register of Shipping	111	4	2	3.60	1.80	50.00
Cyprus Bureau of Shipping	12	0	0	0	0	0
Det Norske Veritas	9,455	275	11	2.91	0.12	4.00
Ferriby Marine	2	0	0	0	0	0
Fidenavis SA	25	1	0	4.00	0	0
Germanischer Lloyd	9,036	403	19	4.46	0.21	4.71
Global Marine Bureau	1,427	208	24	14.58	1.68	11.54
Global Shipping Bureau	8	2	1	25.00	12.50	50.00
Hellenic Register of Shipping	13	3	0	23.08	0	0
Honduras Bureau of Shipping	4	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	5	0	0	0	0	0
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	255	39	1	15.29	0.39	2.56
Indian Register of Shipping	340	16	0	4.71	0	0
Intermaritime Certification Services, S.A.	1,119	79	10	7.06	0.89	12.66
International Naval Surveys Bureau	179	14	1	7.82	0.56	7.14
International Register of Shipping	1,203	178	20	14.80	1.66	11.24
International Ship Classification	917	100	15	10.91	1.64	15.00
Isthmus Bureau of Shipping	1,495	167	22	11.17	1.47	13.17
Korea Classification Society (former Joson Classification Society)	519	89	6	17.15	1.16	6.74
Korea Ship Safety Technology Authority	146	2	0	1.37	0	0
Korean Register of Shipping	7,531	155	3	2.06	0.04	1.94
Lloyd's Register	10,316	337	16	3.27	0.16	4.75
Macosnar Corporation	14	0	0	0	0	0
Marconi International Marine Company Ltd.	6	0	0	0	0	0
Maritime Lloyd Ltd, Georgia	17	0	0	0	0	0
Maritime Technical Systems and Services	147	13	1	8.84	0.68	7.69
National Cargo Bureau Inc.	5	0	0	0	0	0
National Shipping Adjusters Inc	105	10	0	9.52	0	0
New United International Marine Services Ltd	7	0	0	0	0	0
Nippon Kaiji Kyokai	26,000	961	52	3.70	0.20	5.41
NV Unitas	1	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections 2010-2012	No. of overall detentions 2010-2012	No. of RO responsible detentions 2010-2012	3-year average detention percentage	3-year average RO responsible detention percentage	3-year average percentage of RO responsible detentions%
Overseas Marine Certification Services	871	126	9	14.47	1.03	7.14
Panama Bureau of Shipping	152	17	1	11.18	0.66	5.88
Panama Marine Survey and Certification Services, Inc.	2	1	0	50.00	0	0
Panama Maritime Documentation Services	1,191	125	8	10.50	0.67	6.40
Panama Maritime Surveyors Bureau Inc	186	30	1	16.13	0.54	3.33
Panama Register Corporation	168	18	0	10.71	0	0
Panama Shipping Certificate Inc.	10	1	0	10.00	0	0
Panama Shipping Registrar Inc.	514	62	4	12.06	0.78	6.45
Phoenix Register of Shipping	5	1	0	20.00	0	0
Polski Rejestr Statkow	51	2	0	3.92	0	0
Registro Brasileiro de Navios de Aeronaves	1	0	0	0	0	0
Registro Internacional Naval S.A.	37	3	1	8.11	2.70	33.33
Registro Italiano Navale	1,951	91	1	4.66	0.05	1.10
RINAVE Portuguesa	19	1	0	5.26	0	0
Russian Maritime Register of Shipping	1,572	107	4	6.81	0.25	3.74
Russian River Register	2	0	0	0	0	0
Ship Classification Malaysia	6	0	0	0	0	0
Shipping Register of Ukraine	8	1	0	12.50	0	0
SingClass International Pte Ltd	15	2	0	13.33	0	0
Sing-Lloyd	31	4	2	12.90	6.45	50.00
Societe Generale de Surveillance	1	0	0	0	0	0
Turkish Lloyd	19	2	0	10.53	0	0
Union Bureau of Shipping	3,304	546	71	16.53	2.15	13.00
Universal Maritime Bureau	1,006	142	16	14.12	1.59	11.27
Universal Shipping Bureau	260	29	2	11.15	0.77	6.90
Vietnam Register	2,315	226	22	9.76	0.95	9.73
Other	1,341	170	26	12.68	1.94	15.29

See also the note in page 30.

Table 12: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2010-2012	No. of RO responsible detentions 2010-2012	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Union Bureau of Shipping	3,304	71	80	52	0.68	Medium
Croatian Register of Shipping	111	2	5	0	0.46	
International Ship Classification	917	15	26	11	0.28	
International Register of Shipping	1,203	20	33	16	0.26	
Global Marine Bureau	1,427	24	38	19	0.25	
Universal Maritime Bureau	1,006	16	28	12	0.24	
Maritime Technical Systems and Services	147	1	6	0	0.21	
Panama Bureau of Shipping	152	1	6	0	0.19	
Biro Klasifikasi Indonesia	296	3	10	1	0.17	
International Naval Surveys Bureau	179	1	7	0	0.14	
Panama Maritime Surveyors Bureau Inc	186	1	7	0	0.13	
Universal Shipping Bureau	260	2	9	1	0.12	
Korea Classification Society (former Joson Classification Society)	519	6	16	5	0.12	
Isthmus Bureau of Shipping	1,495	22	39	20	0.08	
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	255	1	9	1	0.01	
Panama Shipping Registrar Inc.	514	4	16	5	-0.15	High
Overseas Marine Certification Services	871	9	25	10	-0.17	
Intermaritime Certification Services, S.A.	1,119	10	31	14	-0.47	
Vietnam Register	2,315	22	58	35	-0.64	
Panama Maritime Documentation Services	1,191	8	32	15	-0.77	
Indian Register of Shipping	340	0	12	2	-0.95	
China Corporation Register of Shipping	972	2	27	12	-1.46	
Russian Maritime Register of Shipping	1,572	4	41	22	-1.51	
Bureau Veritas	8,570	18	193	150	-1.74	
Germanischer Lloyd	9,036	19	203	158	-1.74	
American Bureau of Shipping	8,173	15	185	142	-1.77	
Nippon Kaiji Kyokai	26,000	52	558	482	-1.78	
Lloyd's Register	10,316	16	230	182	-1.81	
Det Norske Veritas	9,455	11	212	166	-1.85	

Recognized organization (RO)	No. of overall inspections 2010-2012	No. of RO responsible detentions 2010-2012	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Registro Italiano Navale	1,951	1	50	28	-1.88	
China Classification Society	7,363	3	168	127	-1.94	
Korean Register of Shipping	7,531	3	171	130	-1.94	

- 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.

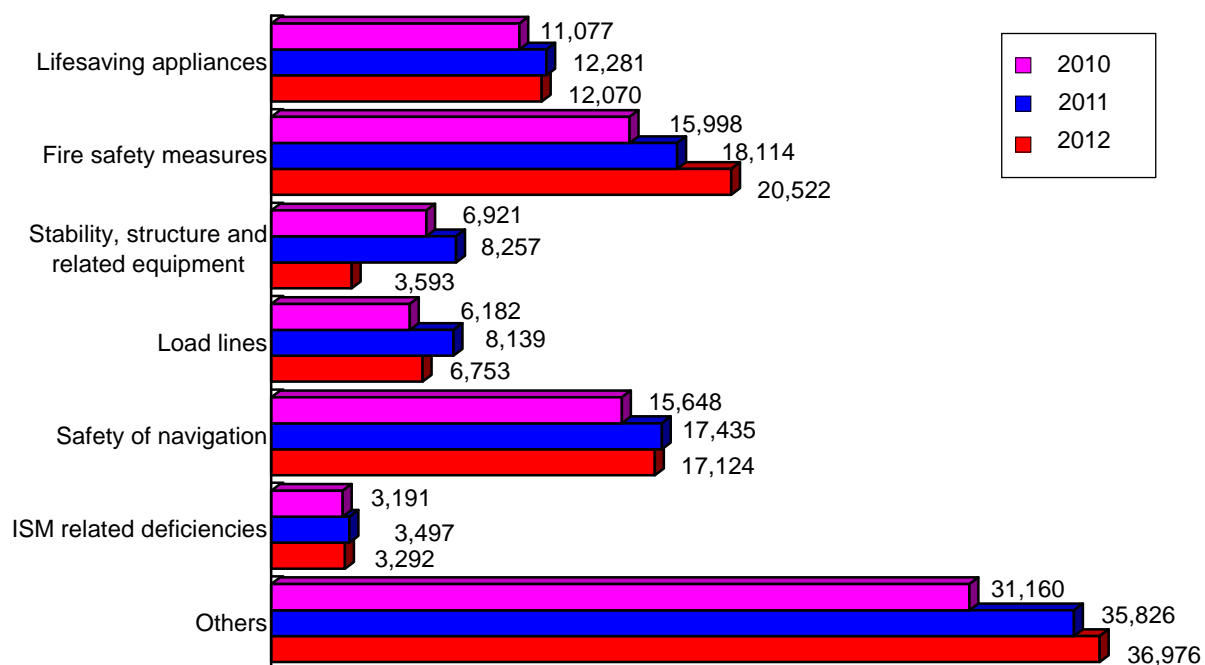
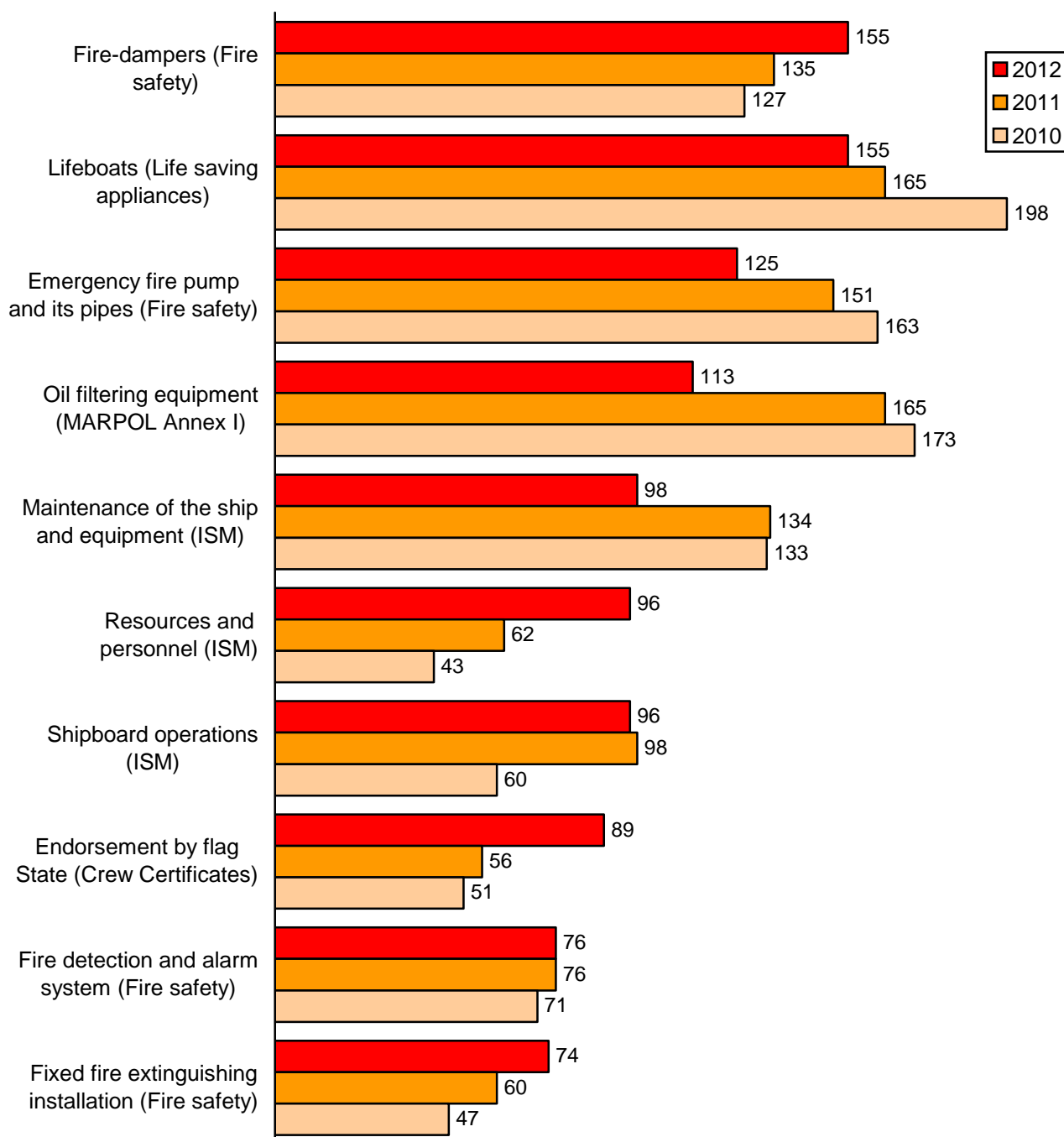
**Figure 17: COMPARISON OF NUMBER OF DEFICIENCIES BY MAIN CATEGORIES**

Table 13: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency		Number of deficiencies		
		2010	2011	2012
Certificate & Documentation	Crew Certificates	1,483	1,400	1,275
	Documents	4,288	5,633	5,359
	Ship Certificates	2,788	2,978	2,754
Structural Conditions		3,730	4,268	3,593
Water/Weathertight conditions		6,182	8,139	6,753
Emergency Systems		4,365	5,209	5,628
Radio Communications		3,296	3,319	2,987
Cargo operations including equipment		478	526	675
Fire safety		15,554	17,709	20,522
Alarms		661	703	798
Working and Living Conditions	Living Conditions	498	459	672
	Working Conditions	3,920	4,585	4,496
Safety of Navigation		16,289	18,319	17,124
Life saving appliances		12,066	13,476	12,070
Dangerous goods		303	289	241
Propulsion and auxiliary machinery		5,466	6,424	5,470
Pollution prevention	Anti Fouling	12	23	16
	MARPOL Annex I	2,094	2,339	2,335
	MARPOL Annex II	18	21	27
	MARPOL Annex III	92	37	17
	MARPOL Annex IV	879	996	1,013
	MARPOL Annex V	864	1,055	981
	MARPOL Annex VI	508	680	796
ISM		3,191	3,497	3,292
Other		1,375	1,608	1,436
<b>Total</b>		<b>90,400</b>	<b>103,692</b>	<b>100,330</b>
ISPS		2,527	2,790	2,490
<b>Grand total</b>		<b>92,927</b>	<b>106,482</b>	<b>102,820</b>

**Figure 18: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES**

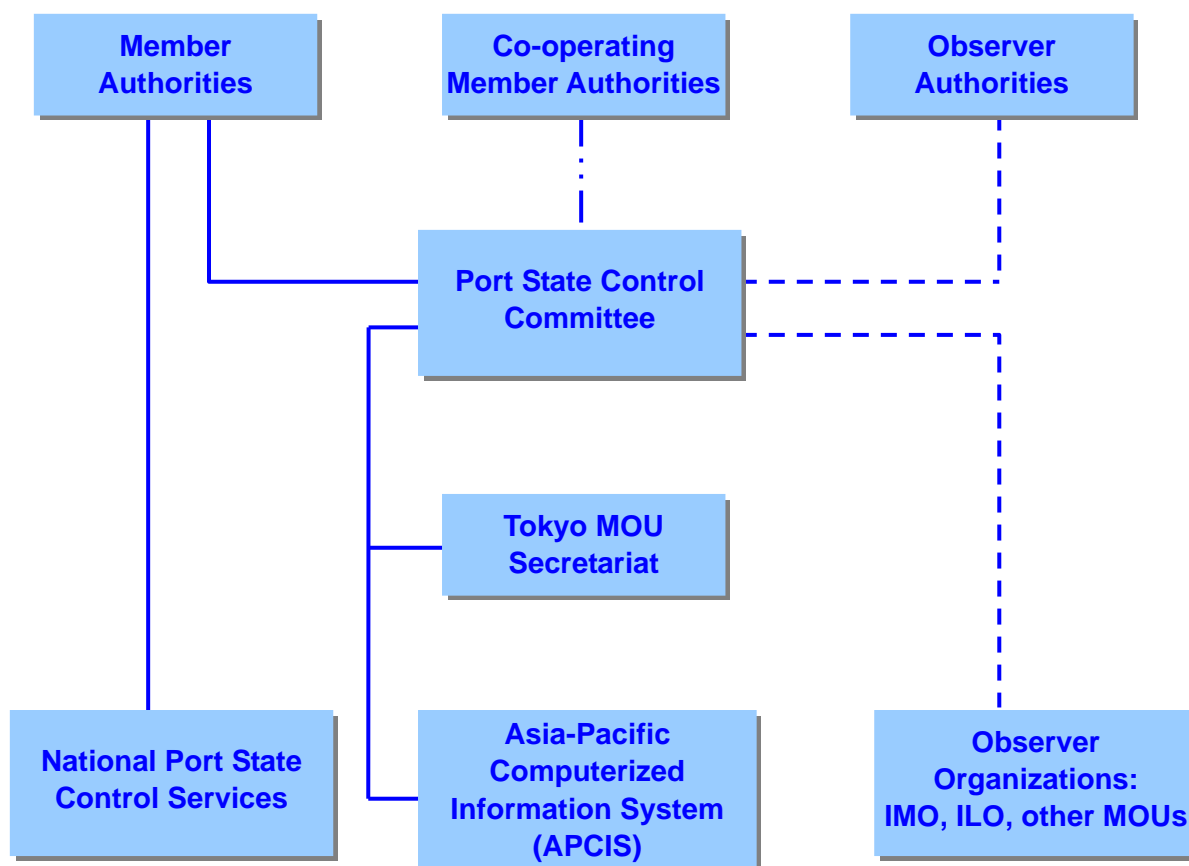


**Table 14: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES**

No.	Most frequent deficiencies	Year		
		2010	2011	2012
1	Fire-dampers (Fire safety)	127	135	155
2	Lifeboats (Life saving appliances)	198	165	155
3	Emergency fire pump and its pipes (Fire safety)	163	151	125
4	Oil filtering equipment (MARPOL Annex I)	173	165	113
5	Maintenance of the ship and equipment (ISM)	133	134	98
6	Resources and personnel (ISM)	43	62	96
7	Shipboard operations (ISM)	60	98	96
8	Endorsement by flag State (Crew Certificates)	51	56	89
9	Fire detection and alarm system (Fire safety)	71	76	76
10	Fixed fire extinguishing installation (Fire safety)	47	60	74

## 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:

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

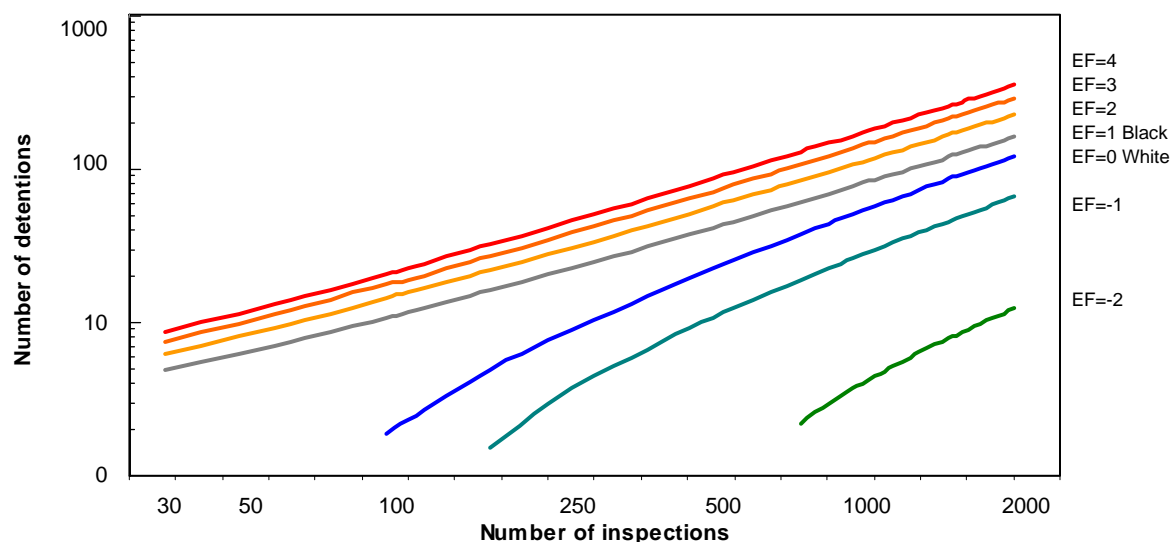
$$u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

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.



**Example flag on Black list:**

Ships of Cambodia were subject to 5,131 inspections of which 814 resulted in a detention. The "black to grey limit" is 390 detentions. The excess factor is 3.68.

$N$  = total inspections

$P$  = 7%

$Q$  = 3%

$Z$  = 1.645

How to determine the black to grey limit:

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

$$u_{black - to - grey} = 5,131 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{5,131 \cdot 0.07 \cdot 0.93}$$

$$u = 390$$

The excess factor is 3.68. This means that 'p' has to be adjusted in the formula. The black to grey limit has an excess factor of 1, so to determine the new value for 'p', 'q' has to be multiplied with 2.68, and the outcome has to be added to the normal value for 'p':

$$p + 2.68q = 0.07 + (2.68 \cdot 0.03) = 0.1504$$

$$u_{excessfactor} = 5,131 \cdot 0.1504 + 0.5 + 1.645 \cdot \sqrt{5,131 \cdot 0.1504 \cdot 0.8496}$$

$$u_{excessfactor} = 814$$

**Example flag on Grey list:**

Ships of Tuvalu were subject to 421 inspections, of which 35 resulted in a detention. The "black to grey limit" is 39 and the "grey to white limit" is 20. The excess factor is 0.80.

How to determine the black to grey limit:

$$u_{black - to - grey} = 421 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{421 \cdot 0.07 \cdot 0.93}$$

$$u_{black-to-grey} = 39$$

How to determine the grey to white limit:

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

$$u_{white - to - grey} = 421 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{421 \cdot 0.07 \cdot 0.93}$$

$$u_{white-to-grey} = 20$$

To determine the excess factor the following formula is used:

$$ef = (\text{Detentions} - \text{white to grey limit}) / (\text{grey to black limit} - \text{white to grey limit})$$

$$ef = (35 - 20.36) / (38.58 - 20.36)$$

$$ef = 0.80$$

#### **Example flag on White list:**

Ships of the Bahamas were subject to 1,976 inspections of which 57 resulted in detention. The "grey to white limit" is 119 detentions. The excess factor is -1.14.

How to determine the grey to white limit:

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

$$u_{\text{white} - \text{to} - \text{grey}} = 1,976 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{1,976 \cdot 0.07 \cdot 0.93}$$

$$u_{\text{white-to-grey}} = 119$$

The excess factor is -1.14. This means that 'p' has to be adjusted in the formula. The grey to white limit has an excess factor of 0, so to determine the new value for 'p', 'q' has to be multiplied with -1.14, and the outcome has to be added to the normal value for 'p':

$$p + (-1.14) = 0.07 + (-1.14 \cdot 0.03) = 0.0358$$

$$u_{\text{excessfactor}} = 1,976 \cdot 0.0358 - 0.5 - 1.645 \cdot \sqrt{1,976 \cdot 0.0358 \cdot 0.9642}$$

$$u_{\text{excessfactor}} = 57$$

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.

## 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.

### ADDRESS OF THE SECRETARIAT

The address of the Tokyo MOU Secretariat reads:

**Tokyo MOU Secretariat**  
**Ascend Shimbashi 8F**  
**6-19-19 Shimbashi**  
**Minato-ku, Tokyo**  
**Japan 105-0004**  
**Tel: +81-3-3433-0621**  
**Fax: +81-3-3433-0624**  
**E-mail: [secretariat@tokyo-mou.org](mailto:secretariat@tokyo-mou.org)**

### STAFF OF THE SECRETARIAT

The staff of the Secretariat consist of:

Mitsutoyo Okada  
Secretary

Ikuo Nakazaki  
Deputy Secretary

Ning Zheng  
Technical Officer

Fumiko Akimoto  
Projects Officer