ANNUAL REPORT

ON
PORT STATE CONTROL
IN THE ASIA-PACIFIC REGION

2011

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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 2011**.

The Tokyo MOU maintains a good trend of development and achievement of PSC activities. In 2011, member Authorities of the Tokyo MOU carried out a total of 28,627 inspections, which is an increase of 11% over the previous year. In addition, the regional inspection rate has been also increased from 66% to 68%. In collaboration with the Paris MOU, the Tokyo MOU successfully conducted the concentrated inspection campaign (CIC) on structural safety and the Load Lines. The Tokyo MOU continues its efforts to improve the internal system and to enhance the external relationship.

This annual report summarizes the port State control developments and activities of the Tokyo MOU in 2011. Furthermore, the report also includes port State control statistics and analysis which provides the results of inspections carried out by member Authorities during the year.

As observed in the previous Annual Report, the overall detention rate has declined gradually during the past three years. However, more attention needs to be paid to the areas of maintenance of ship and equipment, and development of plans for shipboard operations related to the ISM Code, which have been found as the two most frequent reasons for detentions. With that in mind, the Tokyo MOU will continue to strengthen and to improve measures for eradication of substandard ships so as to promote the safety, security, and protection of the marine environment, and to improve living and working conditions onboard.

Hua Siong Ong
Chairman
Port State Control Committee

Mitsutoyo Okada
Secretary
Tokyo MOU Secretariat

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O V E R V I E W

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 seventeenth issue and covers port State control activities and developments in the year 2011.

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 is the only co-operating member Authority 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 2011

For the purpose of promotion of better communication and relationship with the industry, the Tokyo MOU took an initiative to consider establishment of an appropriate scheme for exchange of views and carrying out dialogues with the industry. The scheme under consideration would improve the common understanding and mutual co-operation between the Tokyo MOU Authorities and the industry.

The concentrated inspection campaign (CIC) on Structural Safety and the Load Lines Convention was conducted from 1 September to 30 November 2011. During the campaign period, a total of 7,534 PSC inspections were conducted by the eighteen member Authorities, of which 5,901 were related to a CIC inspection. A total of 2,929 CIC related deficiencies were recorded. The most significant deficiencies found during the campaign were related to the protection of openings (Ventilators, air pipes, casings) 554 (18.91%), followed with casing (Hatchway-, tarpaulins, etc.) 273 (9.29%) and Doors 245 (8.36%). There were a total of 346 detentions during the three-month campaign period, among which 83 ships were detained as the direct results of the CIC. The detention rate for the CIC is 1.41% while the overall detention rate for the period is 4.59%. A major concern which had been raised from the CIC was that

a large number of deficiencies relating to cargo hatch openings were found onboard ships during the period. This campaign was carried out jointly with the Paris MOU and also with participation by regional PSC regimes of the Viña del Mar Agreement, the Indian Ocean MOU, the Mediterranean MOU and the Black Sea MOU.

The trial implementation of measures against the under-performing ships have been continued for more than one year. The measures taken on under-performing ships proves effective as it has been found that more and more people check the list of under-performing ships published by the Tokyo MOU regularly and that a number of positive feedbacks from the relevant flag State administrations and the ISM companies of the ships have been received.

THE PORT STATE CONTROL COMMITTEE

The twenty-first meeting of the Port State Control Committee was held in Busan, Republic of Korea, from 18 to 21 April 2011. The meeting was hosted by the Ministry of Land, Transport and Maritime Affairs of the Republic of Korea. 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-first Committee meeting was attended by representatives of the member Authorities of Australia, Canada, Chile, China, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand and Viet Nam; the co-operating member Authority of the Marshall Islands and observers from Macao (China), the United States Coast Guard, the Black Sea MOU, the Indian Ocean MOU, the Paris MOU, the Viña del Mar Agreement and the International Maritime Organization.

The Committee reviewed the results of trial

The twenty-first Committee meeting, Busan, April 2011.

implementation of measures against the under-performing ships. In order to gain more experiences and to promote more effective implementation of the measures, the Committee agreed to continue the trial for a further inter-sessional period and to make the final decision thereon at the next meeting.

The Committee considered a detailed analysis report of the CIC on lifeboat launching arrangements conducted in 2009. The Committee discussed the findings and recommendations. The Committee agreed to consider follow-up measures stemming from the CIC at the next meeting. The Committee approved the arrangements for the CIC on Structural Safety and the Load Lines which was planned to be conducted during period September – November 2011 simultaneously with the Paris MOU. The Committee reconfirmed its decision for the joint CIC on Fire Safety System (FSS) with the Paris MOU in 2012. Furthermore, the Committee also considered the possible topics which could be selected for CICs in 2013 and onward.

The Committee reviewed achievements and status of the action plan developed based on the strategic plan. The Committee updated the action plan by changing or adding further actions to the relevant items. The Committee considered the text of agreement with IMO on data exchange with GISIS. The Committee approved the agreement and authorized the Secretary to sign the agreement with IMO during the fifth IMO workshop for PSC MoU/Agreement Secretaries and Database Managers.

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

- assessment of performance of member Authorities;
- review of list of follow-up actions emanating from the second Joint Ministerial Conference;
- consideration of elements of Paris MOU new inspection regime (NIR);
- schedule for implementation of the new coding system;
- review and adjustment of the capped amount of financial contribution;
- establishment of scheme for dialogue and exchange of views with the industry; and
- awarding the winner of the best deficiency photo of the year.

The twenty-second meeting of the Port State Control Committee will be held in Chile in April 2012.

TECHICAL WORKING GROUP (TWG)

The fourth meeting of the Technical Working Group (TWG) was held in Busan, Republic of Korea, from 15 to 16 April 2011, prior to the twenty-first meeting of the Committee. The TWG04 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.

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

As mentioned in the previous Annual Report, the technical co-operation activities have been implemented in accordance with the revised integrated strategic plan for technical co-operation programmes from 2011 to 2015. Now, the technical co-operation programmes consist of general training course for PSC officers, specialized training course, expert mission training, PSCO exchange and PSC seminars.

The first general training course for PSC officers was held in Yokohama, Japan, from 30 August to 27 September 2011. This was the seventh training course jointly organized by IMO and the Tokyo MOU. A total of 20 PSC officers participated in the training course. Twelve of them were from the Tokyo MOU Authorities of Chile, China, Fiji, Indonesia, Republic of Korea, Macao (China), Malaysia,

Training course for PSC officers

the Marshall Islands, New Zealand, the Philippines, Thailand and Viet Nam. The other eight were invited by IMO, one each from Abuja MOU, the Viña del Mar Agreement, Black Sea MOU, Caribbean MOU, Mediterranean MOU, Riyadh MOU and two from the Indian Ocean MOU. The course was conducted with the assistance by the Shipbuilding Research Center of Japan (SRC).

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 port State control provisions, convention requirements and regulations; PSC inspection and reporting procedures, and onboard training for practical PSC inspection experience during the latter two weeks. 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 five groups to receive the practical training at ports of Yokohama, Osaka, Kobe, Hiroshima and Hakata respectively. In addition, a technical visit to a liferaft manufacturer was also arranged.

The nineteenth seminar for PSC officers was held Singapore from 25 to 28 July 2011. The seminar was hosted by the Maritime and Port Authority of Singapore (MPA). Participants from Authorities of Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Democratic People's Republic of Korea, the

Onboard training

Onboard training

were two case study sessions conducted during the seminar as well as discussion of the actual cases provided by Authorities or reviewed by the detention review panel.

The first specialized training course was organized in Vancouver, British Columbia, Canada, from 14 to 17 November 2011, by the kind invitation of Transport Canada, Marine Safety. The theme of this specialized training course was the Maritime Labour Convention (MLC) 2006. Participants from Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Macao (China), Malaysia, the Marshall Islands, the Philippines, Singapore, Thailand, the United States Coast Guard, Viet Nam and the Viña del Mar Agreement attended the training course. Two speakers were invited from the Liberian

Republic of Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand, Vanuatu and Viet Nam attended the seminar.

Experts from MPA of Singapore and MLIT of Japan delivered the comprehensive and informative presentations on the outcome of relevant IMO meetings regarding PSC, the CIC on Structural Safety and the Load Lines, bulk carrier safety, assessment and evaluation of lifeboat release hooks, oily water separator and explanations on issues concerning ECDIS. Participants also received information about the recent development and activities of the Tokyo MOU, problems/issues on PSC inspection reporting, new coding system and PSC activities in Singapore. There

The nineteenth seminar for PSC officers

Specialized training course

Maritime Administration, who presented the MLC2006 and the various titles giving in depth knowledge of the convention and the procedures to obtain the certification for the ship. Explanation of the guidelines for Flag States and Port State inspectors was also given during the course. In addition to the main subject, various presentations were made by representatives from Transport Canada, ITF local office, Seafarers' Mission and the Secretariat.

There were two expert missions organized in 2011. One mission was held in Kota Konabalu, Malaysia, from 6 to 17 June 2011. Experts from the Republic of Korea conducted the training. The other one was in Manila, the Philippines, from 17 to 28 October 2011, which was carried out by two experts dispatched from Japan.

In 2011, eight PSC officer exchanges were completed, namely one PSC officer from Japan to Singapore, one from Australia to Japan, one from Canada to China, one from Australia to Singapore, one from Russian Federation to Australia, one from Singapore to Canada, one from Hong Kong (China) to Republic of Korea and one from Japan to Hong Kong (China). Currently, the PSC officers exchange programme is implemented among the Authorities of Australia, Canada, China, Hong Kong (China), Japan, Republic of Korea, New Zealand, Russian Federation and Singapore.

The successful and effective implementation of technical co-operation programmes gives the Tokyo MOU the potential for the sustainable development and achievement. The above mentioned technical co-operation activities have received full support from all 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 nineteenth session of FSI in February 2011.

The Fifth IMO Workshop for PSC MoU/ Agreement Secretaries and Database Managers was held from 14 to 16 June 2011 at IMO Headquarters. The major agenda discussed at the workshop were update on activities and decisions by regional PSC agreements, information network, draft Assembly Resolution on Procedures on PSC and other PSC-related matters and technical co-operation activities. During the workshop, Tokyo MOU, as well as Riyadh MOU and the Viña del Mar Agreement, signed the agreement with IMO on data exchange with GISIS.

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 2011, continuous efforts and further coordinated

PSC training course for Indian Ocean MOU

actions by the two Memoranda were made on the following:

- carrying out the joint CIC on Structural Safety and the Load Lines;
- preparation of joint CICs on Fire Safety System (FSS) 2012 and on Propulsion and Auxiliary Machinery 2013;
- continuous submission to IMO on annual list of flags targeted by the Paris MOU, Tokyo MOU and the United States Coast Guard;
- analysis of performance of flag and RO and submission of the outcome to IMO jointly; and
- liaison on management and maintenance of the coding system.

Under the project of technical co-operation with other regions, a third PSC training course was held in Mombasa, Kenya, from 31 January to 11 February 2011. The training was organized by the Tokyo and the Indian Ocean Memoranda, and IMO jointly. Experts from the Tokyo MOU Authorities of Australia, Japan and Republic of Korea and an officer from the Tokyo MOU Secretariat conducted the training. A total of 16 participants from the Indian Ocean MOU Authorities as well as other regional PSC agreements attended the training course. The training course in Kenya was carried out with the financial support by the Nippon Foundation and IMO.

PORT STATE CONTROL UNDER THE TOKYO MOU, 2011

INSPECTIONS

In 2011, 28,627 inspections, involving 15,771 individual ships, were carried out on ships registered under 103 flags. Figure 2 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. Out of 28,627 inspections, there were 18,650 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 23,268*, the inspection rate in the region was approximately 68%** in 2011 (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.

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 2011, 1,562 ships registered under 61 flags were detained because of serious deficiencies

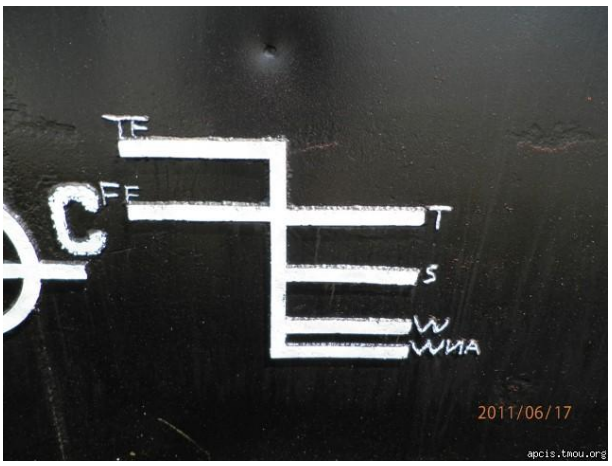
* Number of individual ships which visited the ports of the region during the year (the figure was provided by LLI).

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

found onboard. The detention rate of ships inspected was 5.46%. Comparing with the last year, detentions increased 151 by number or 11% by percentage.

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 2009-2011 consists of 62 flags, whose ships were involved in 30 or more inspections during the period. It is encouraging that both the black list and the grey list became smaller and the white list has expanded. There are 13 flags on the black list. Belize, Turkey and Tuvalu moved from the black list into the grey list but Tonga rejoined in the black list. The grey list consists of 16 flags and the white list includes 33 flags which is the highest number since publication of the black-grey-white list.



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 103,549 deficiencies were recorded in 2011. The deficiencies found are categorized and shown in Figure 6 and Table 6.

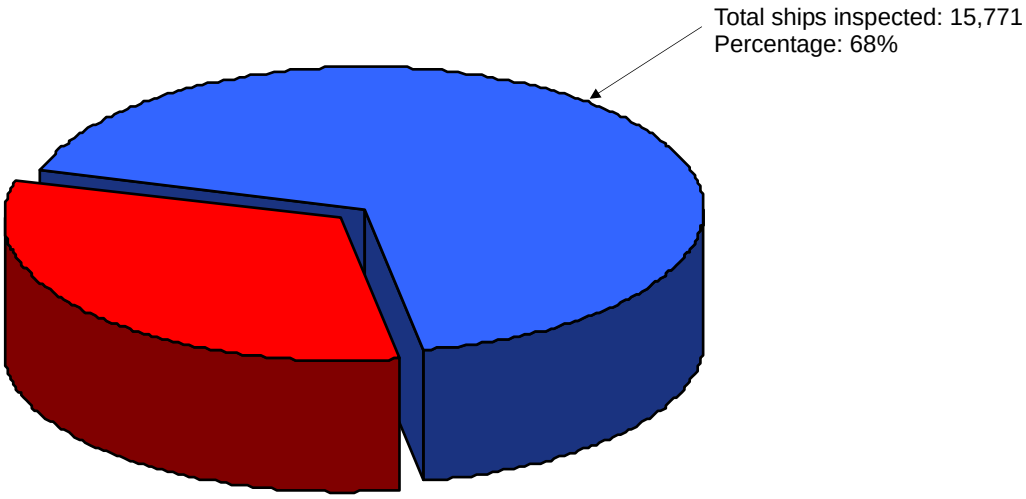
It has been noted that fire safety measures, life-saving appliances and safety of navigation remain as the three major categories of deficiencies which are frequently discovered on ships. In 2011, 18,114 fire safety measures related deficiencies, 17,435 safety of navigation related deficiencies and 12,281 life-saving appliances related deficiencies were recorded, representing nearly 50% of the total number of deficiencies.

The number of deficiencies relating to stability, structure and related equipment and the Load Lines increased about 19% and 32% respectively. This can be seen as the direct results of the CIC of the year in one hand and also proved the appropriateness for taking this subject for the campaign on the other hand. It is further noted that the overall MARPOL related deficiencies rose over 20%.

OVERVIEW OF PORT STATE CONTROL RESULTS 2001 – 2011

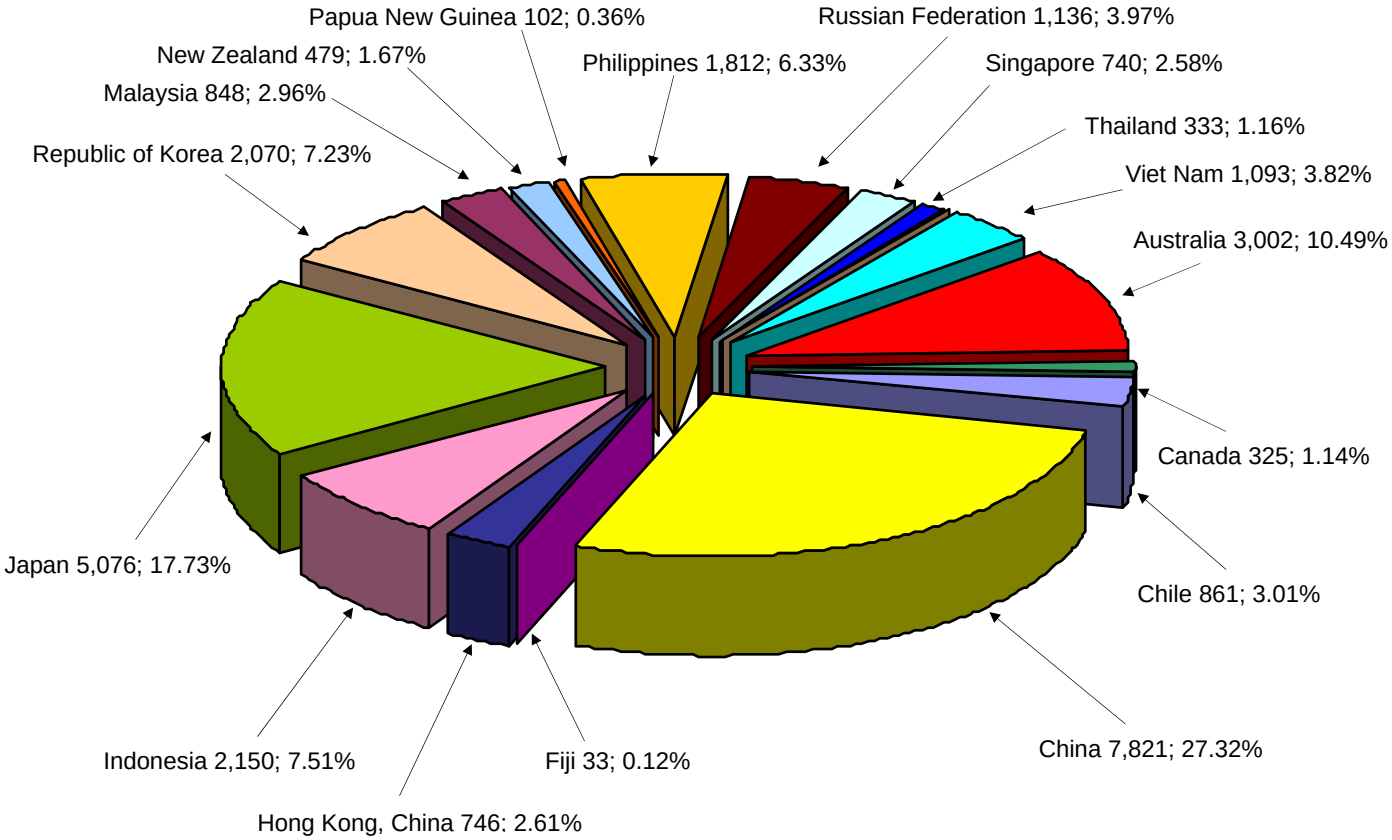
Figures 8-13 show the comparison of port State inspection results for 2001 - 2011. These figures indicate the trends in port State activities and ship performance over the past eleven years.

Figure 1: INSPECTION PERCENTAGE



Total individual ship visited: 23,268

Figure 2: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES



Total inspections: 28,627

Figure 3: TYPE OF SHIP INSPECTED

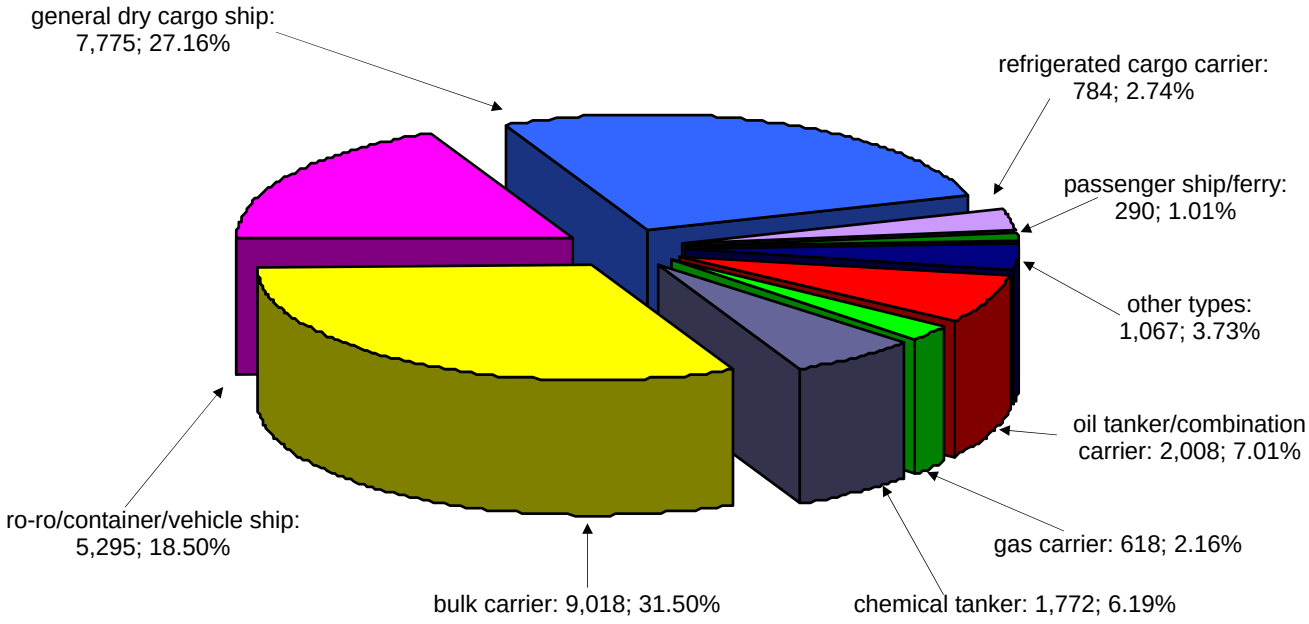
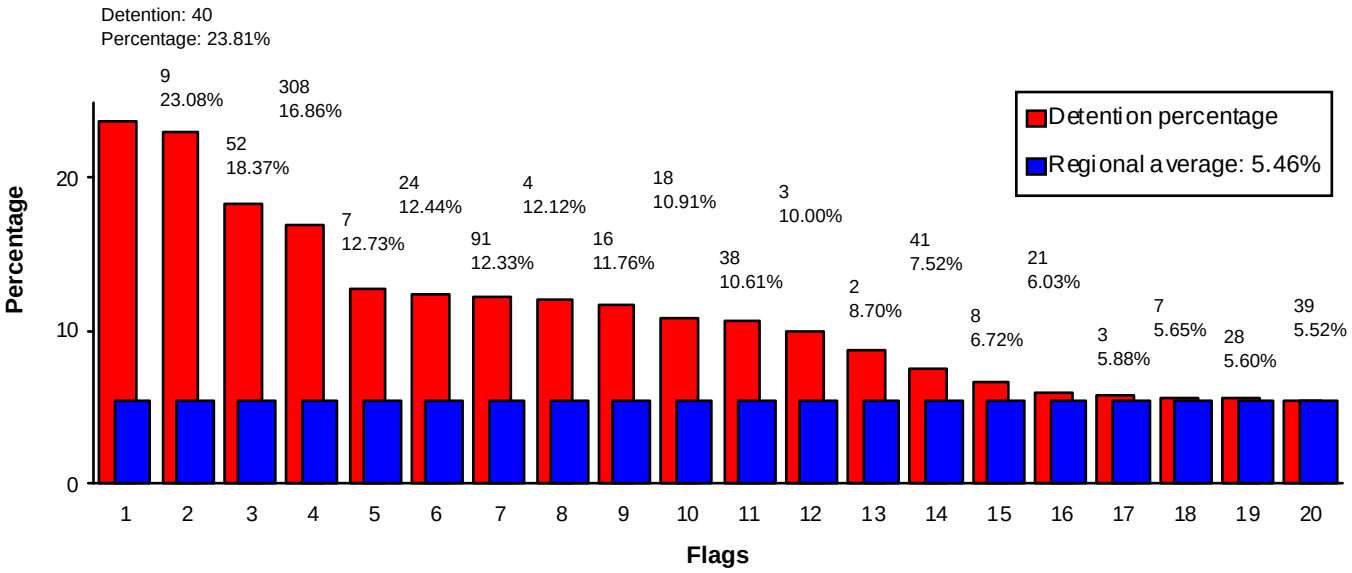


Figure 4: DETENTIONS PER FLAG



Flags:

1. Korea, Dem. People's Rep.	2. Georgia	3. Sierra Leone	4. Cambodia
5. Saint Kitts and Nevis	6. Indonesia	7. Viet Nam	8. Bangladesh
9. Mongolia	10. Kiribati	11. Thailand	12. Barbados
13. Curacao	14. Antigua and Barbuda	15. Tuvalu	16. Belize
17. Gibraltar (UK)	18. India	19. Cyprus	20. 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 3.

Figure 5: DETENTION PER SHIP TYPE

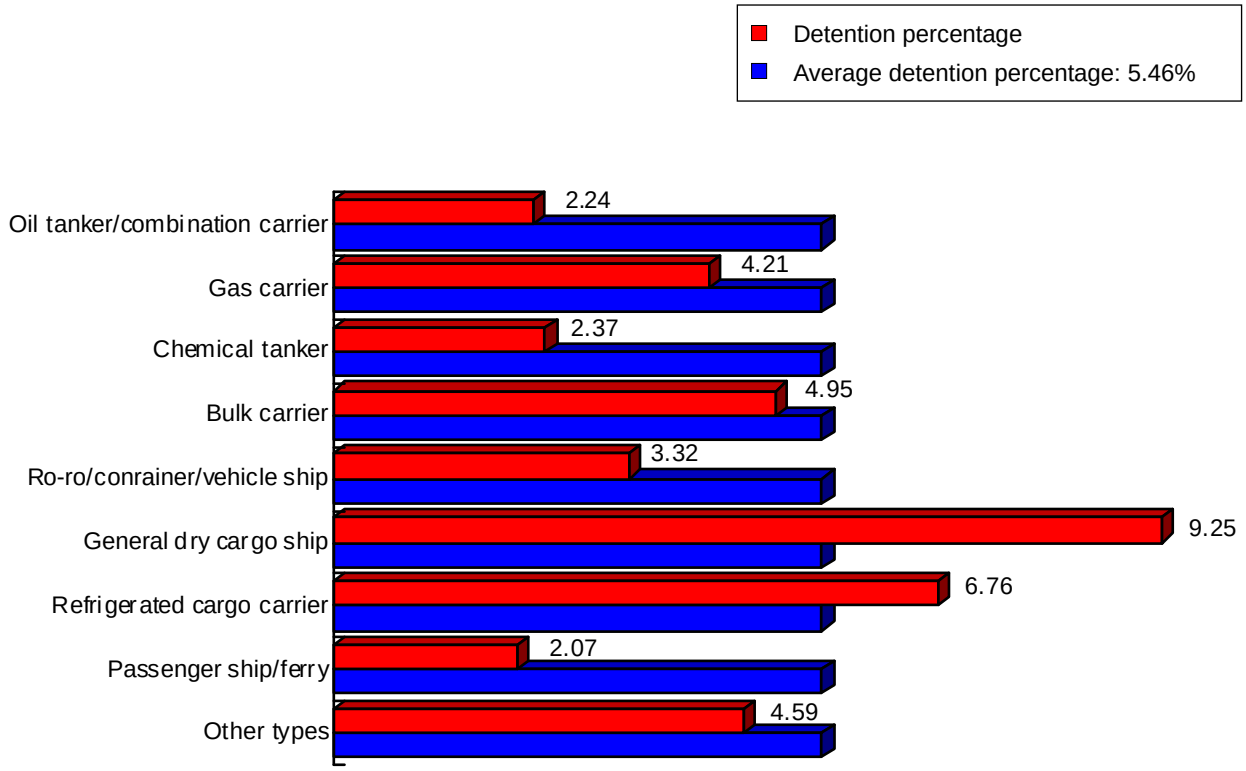


Figure 6: DEFICIENCIES BY MAIN CATEGORIES

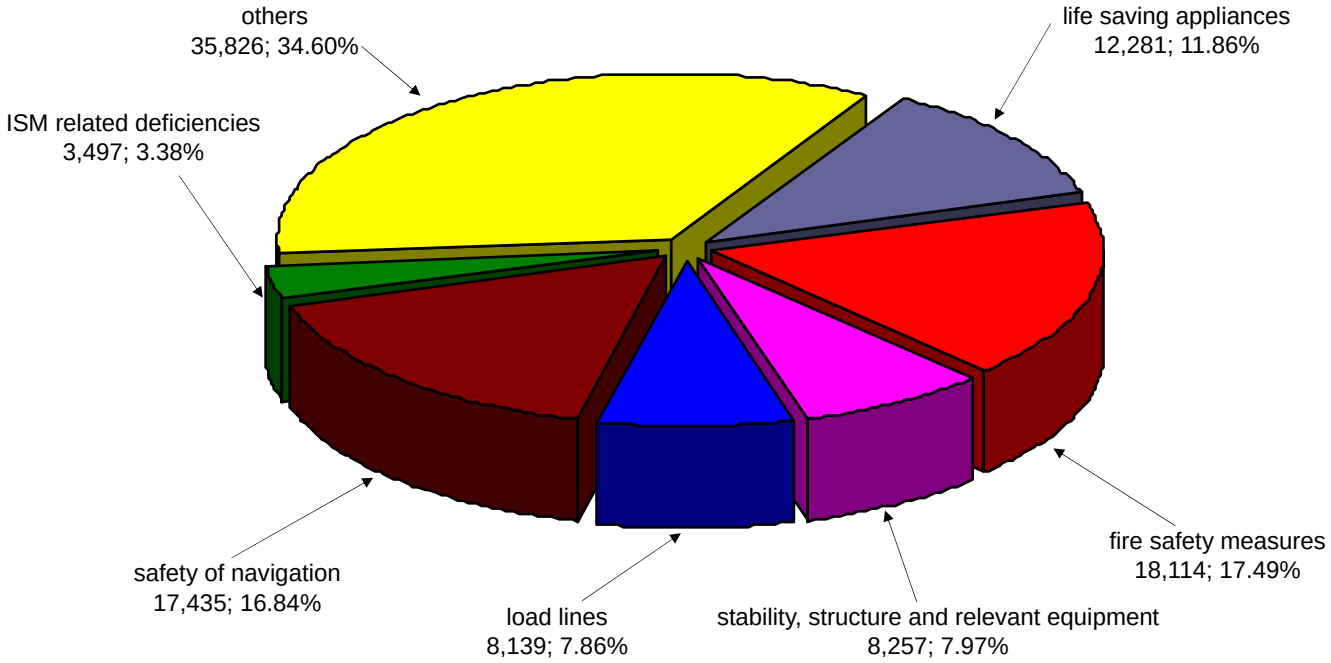
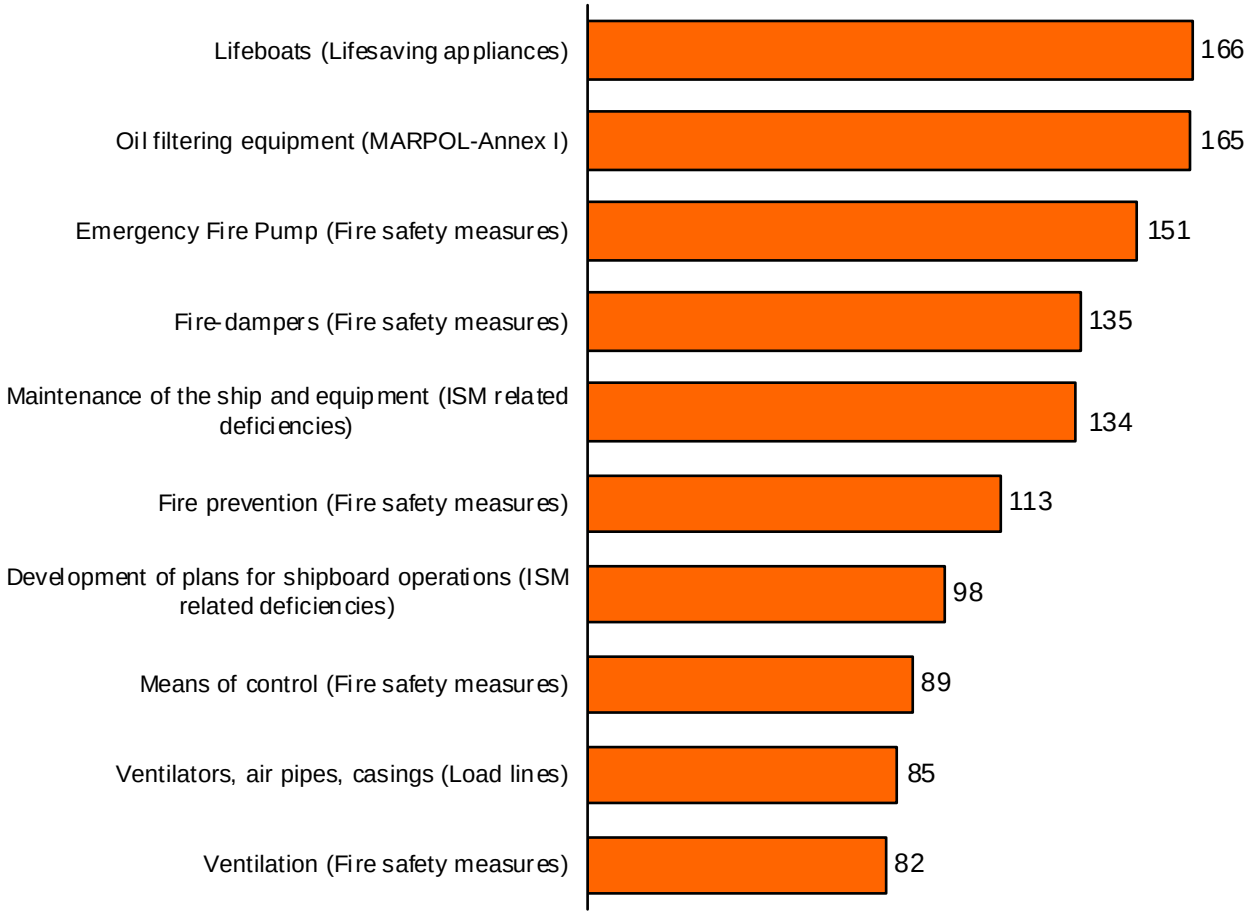


Figure 7: MOST FREQUENT DETAINABLE DEFICIENCIES



OVERVIEW OF PORT STATE CONTROL RESULTS 2001 - 2011

Figure 8: NO. OF INSPECTIONS

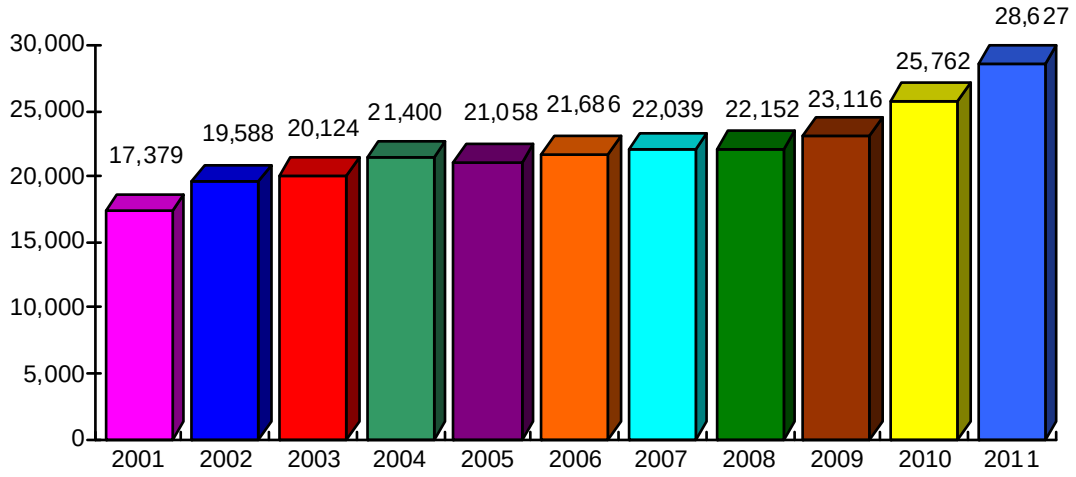


Figure 9: INSPECTION PERCENTAGE

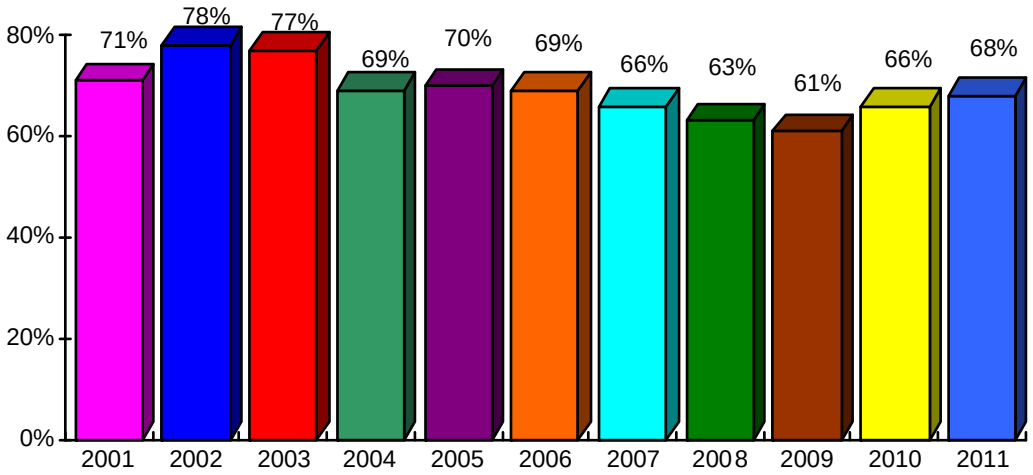


Figure 10: NO. OF INSPECTIONS WITH DEFICIENCIES

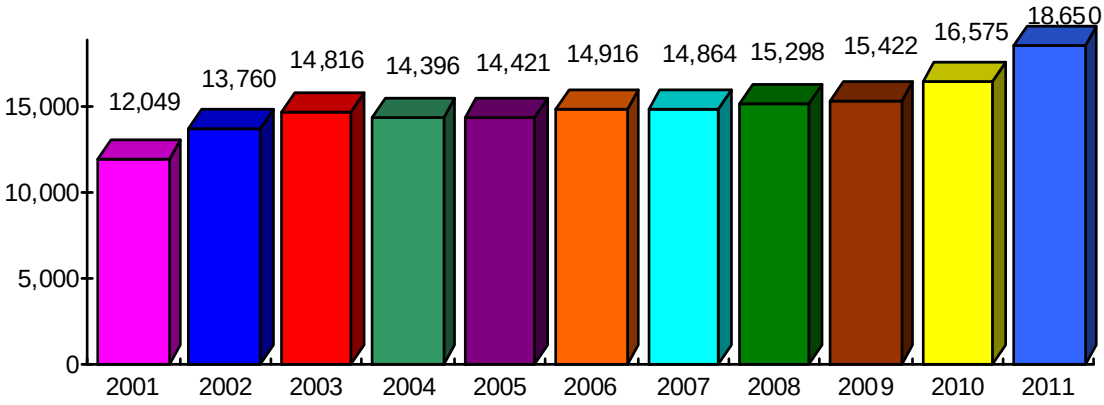


Figure 11: NO. OF DEFICIENCIES

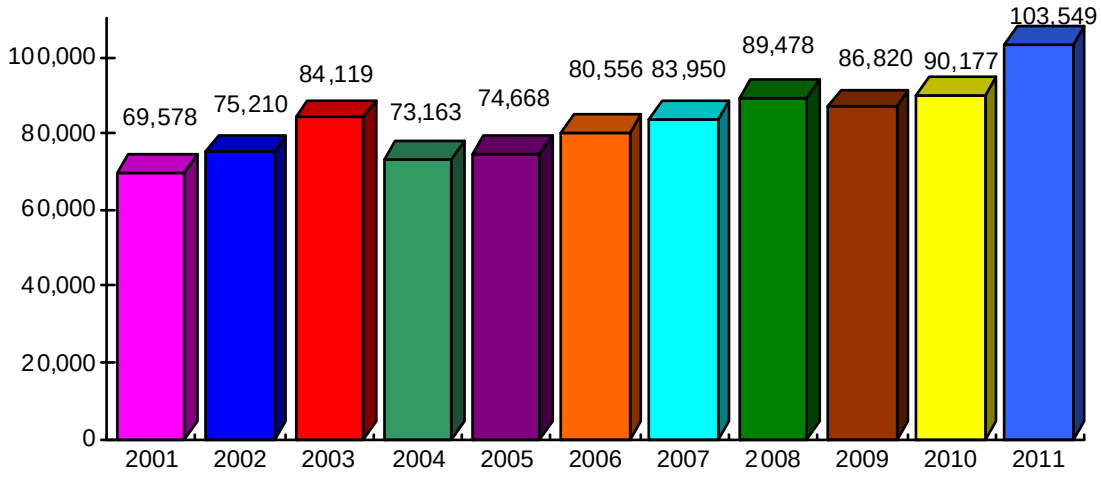


Figure 12: NO. OF DETENTIONS

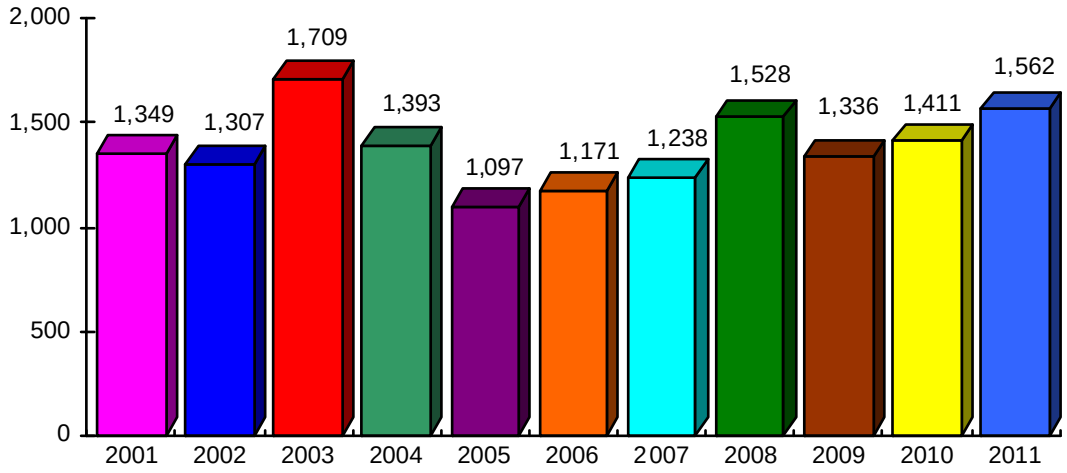
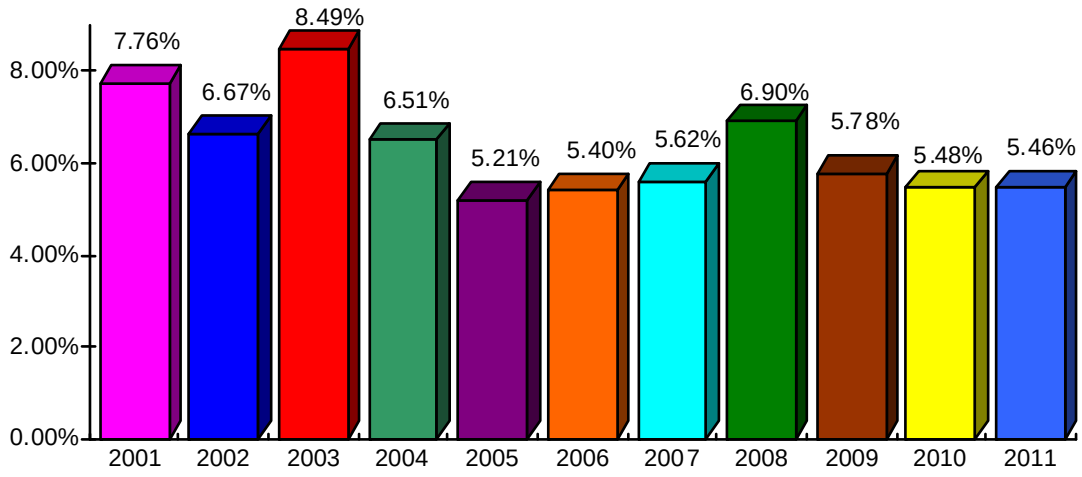


Figure 13: DETENTION PERCENTAGE



ANNEX 1

STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(As at 31 December 2011)

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	-	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	-
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 2011)

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	-	-	-	-
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
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 2011

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]	2,660	4,250	3,002	1,248	1,741	8,406	275	4,914	54.13	9.16
Canada[4]	319	325	325	0	187	676	8	1,448	22.03	2.46
Chile	780	1,181	861	320	391	1,035	28	1,756	44.42	3.25
China	5,916	9,337	7,821	1,516	6,745	48,222	678	13,986	42.30	8.67
Fiji	31	52	33	19	2	3	0	160	19.38	0
Hong Kong, China	739	769	746	23	437	1,404	25	4,812	15.36	3.35
Indonesia	1,907	2,508	2,150	358	627	2,994	77	6,199	30.76	3.58
Japan	3,515	6,069	5,076	993	3,343	17,689	217	7,507	46.82	4.28
Republic of Korea	1,781	3,104	2,070	1,034	1,595	7,297	126	9,280	19.19	6.09
Malaysia	741	1,065	848	217	462	1,855	13	5,845	12.68	1.53
New Zealand	406	729	479	250	242	829	12	868	46.77	2.51
Papua New Guinea	88	144	102	42	38	119	3	346	25.43	2.94
Philippines	1,449	2,154	1,812	342	499	1,967	4	1,992	72.74	0.22
Russian Federation[4]	761	2,219	1,136	1,083	860	4,698	25	1,339	56.83	2.20
Singapore	580	1,240	740	500	659	2,840	29	12,163	4.77	3.92
Thailand	289	402	333	69	131	319	6	3,540	8.16	1.80
Vanuatu	0	0	0	0	0	0	0	9	0	0
Viet Nam	926	1,523	1,093	430	691	3,196	36	2,572	36.00	3.29
Total	**15,771**	**37,071**	**28,627**	**8,444**	**18,650**	**103,549**	**1,562**	**Regional 23,268**	**Regional 68%**	**Regional 5.46%**

1) Numbers of deficiencies and detentions do not include those related to security.
2) LLI data for 2011.
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 MARITME SECURITY

Authority	No. of inspections	No. of inspections with security related deficiencies	No. of secuirty related deficiencies	No. of security related detentions	Detention percentage (%)
Australia	3,002	4	5	0	0
Canada	325	3	3	0	0
Chile	861	13	13	0	0
China	7,821	1,055	1,327	29	0.37
Fiji	33	0	0	0	0
Hong Kong, China	746	16	17	1	0.13
Indonesia	2,150	28	31	1	0.05
Japan	5,076	370	446	3	0.06
Republic of Korea	2,070	300	447	11	0.53
Malaysia	848	87	97	0	0
New Zealand	479	6	8	0	0
Papua New Guinea	102	6	6	0	0
Philippines	1,812	33	42	0	0
Russian Federation	1,136	85	106	0	0
Singapore	740	305	310	0	0
Thailand	333	2	2	0	0
Vanuatu	0	0	0	0	0
Viet Nam	1,093	68	73	1	0.09
Total	**28,627**	**2,381**	**2,933**	**46**	**Regional 0.16%**

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 %
Algeria	3	2	11	1	33.33
Antigua and Barbuda	545	347	1,490	41	7.52
Argentina	3	2	8	0	0
Australia	7	4	5	0	0
Bahamas	665	351	1,366	24	3.61
Bahrain	1	0	0	0	0
Bangladesh	33	31	229	4	12.12
Barbados	30	23	133	3	10.00
Belgium	39	24	93	2	5.13
Belize	348	333	2,244	21	6.03
Bermuda (UK)	73	39	149	1	1.37
Bolivia	1	1	3	0	0
Brazil	3	3	29	1	33.33
Brunei Darussalam	5	1	9	0	0
Bulgaria	1	1	11	0	0
Cambodia	1,827	1,796	15,044	308	16.86
Cayman Islands (UK)	95	42	137	2	2.11
Chile	1	0	0	0	0
China	707	391	1,708	1	0.14
Comoros	12	12	87	2	16.67
Cook Islands	6	5	28	0	0
Croatia	28	12	56	0	0
Curacao	23	16	56	2	8.70
Cyprus	500	282	1,263	28	5.60
Denmark	128	67	249	3	2.34
Dominica	14	11	87	2	14.29
Ecuador	2	2	7	1	50.00
Egypt	18	10	87	2	11.11
Equatorial Guinea	3	3	23	0	0
Ethiopia	7	6	38	1	14.29
Falkland Islands (UK)	3	3	11	0	0
Fiji	1	0	0	0	0
France	47	27	88	0	0
Georgia	39	37	333	9	23.08
Germany	278	175	754	8	2.88
Gibraltar (UK)	51	28	99	3	5.88
Greece	333	156	593	11	3.30
Honduras	1	1	3	0	0
Hong Kong, China	2,259	1,259	5,531	36	1.59

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
India	124	67	389	7	5.65
Indonesia	193	179	1,166	24	12.44
Iran	5	5	19	0	0
Ireland	3	1	1	0	0
Isle of Man (UK)	142	69	255	3	2.11
Israel	5	4	28	0	0
Italy	152	75	398	5	3.29
Jamaica	5	4	19	0	0
Japan	154	94	328	0	0
Kiribati	165	146	1,184	18	10.91
Korea, Democratic People's Republic	168	166	1,707	40	23.81
Korea, Republic of	1,312	1,010	5,245	14	1.07
Kuwait	13	5	34	1	7.69
Liberia	2,019	1,196	4,974	85	4.21
Libyan Arab Jamahiriya	1	1	2	0	0
Lithuania	1	1	3	0	0
Luxemburg	18	9	32	1	5.56
Malaysia	282	157	729	12	4.26
Maldives	11	9	81	0	0
Malta	707	423	1,958	39	5.52
Marshall Islands	1,109	547	2,289	40	3.61
Mauritius	2	1	4	0	0
Mexico	1	1	1	0	0
Moldova	6	6	26	0	0
Mongolia	136	127	1,026	16	11.76
Myanmar	15	13	83	1	6.67
Netherlands	139	76	273	4	2.88
New Zealand	2	2	14	0	0
Norway	227	103	392	7	3.08
Pakistan	7	6	34	0	0
Panama	8,692	5,573	31,127	432	4.97
Papua New Guinea	10	10	76	2	20.00
Peru	1	0	0	0	0
Philippines	215	139	686	11	5.12
Portugal	6	2	6	0	0
Qatar	5	2	5	0	0
Romania	1	0	0	0	0
Russian Federation	276	243	1,244	9	3.26
Saint Helena (UK)	1	1	13	0	0.00
Saint Vincent and the Grenadines	238	208	1,230	8	3.36

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Samoa	2	2	23	0	0
Saudi Arabia	20	14	50	0	0
Sierra Leone	283	275	2,661	52	18.37
Singapore	1,664	769	3,239	44	2.64
Solomon Islands	1	1	7	0	0
Spain	4	1	2	0	0
Sri Lanka	7	3	10	0	0
Saint Kitts and Nevis	55	52	333	7	12.73
Sweden	20	13	28	0	0
Switzerland	21	13	74	1	4.76
Taiwan, China	83	44	241	3	3.61
Tanzania	11	11	126	2	18.18
Thailand	358	285	1,774	38	10.61
Togo	9	8	53	0	0
Tonga	12	12	108	5	41.67
Tunisia	1	1	6	0	0
Turkey	65	38	155	3	4.62
Tuvalu	119	99	678	8	6.72
Ukraine	2	2	23	0	0
United Arab Emirates (UAE)	5	4	21	0	0
United Kingdom (UK)	269	131	475	10	3.72
United States	53	30	98	1	1.89
Vanuatu	116	69	340	1	0.86
Viet Nam	738	589	3,881	91	12.33
Total	**28,627**	**18,650**	**103,549**	**1,562**	**Regional 5.46**

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	99	33	160	2	2.02
Combination carrier	73	32	118	2	2.74
Oil tanker	1,836	767	3,444	41	2.23
Gas carrier	618	298	1,380	26	4.21
Chemical tanker	1,772	919	4,565	42	2.37
Bulk carrier	9,018	5,519	28,652	446	4.95
Vehicle carrier	668	286	844	11	1.65
Container ship	4,421	2,663	10,963	151	3.42
Ro-Ro cargo ship	206	149	716	14	6.80
General cargo/multi-purpose ship	7,775	6,480	45,040	719	9.25
Refrigerated cargo carrier	784	619	3,295	53	6.76
Woodchip carrier	235	138	577	12	5.11
Livestock carrier	50	35	280	7	14.00
Ro-Ro passenger ship	92	78	650	5	5.43
Passenger ship	198	115	417	1	0.51
Factory ship	1	1	5	0	0
Heavy load carrier	79	53	247	3	3.80
Offshore service vessel	115	52	217	3	2.61
MODU & FPSO	4	4	43	1	25.00
High speed passenger craft	42	40	150	0	0
Special purpose ship	49	31	109	0	0
Tugboat	222	142	729	8	3.60
Others	270	196	948	15	5.56
Total	**28,627**	**18,650**	**103,549**	**1,562**	**5.46**

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%
Alfa Register of Shipping	5	0	0	0	0	0
American Bureau of Shipping	2,698	90	4	3.34	0.15	4.44
Belize Maritime Bureau Inc.	3	1	0	33.33	0	0
Biro Klasifikasi Indonesia	97	17	0	17.53	0	0
Bureau Securitas	4	0	0	0	0	0
Bureau Veritas	2,858	146	1	5.11	0.03	0.68
Ceskoslovensky Lodin Register	4	0	0	0	0	0
China Classification Society	2,416	27	0	1.12	0	0
China Corporation Register of Shipping	336	23	2	6.85	0.60	8.70
Cosmos Marine Bureau	14	0	0	0	0	0
Croatian Register of Shipping	34	1	0	2.94	0	0
Cyprus Bureau of Shipping	4	0	0	0	0	0
Det Norske Veritas	3,134	106	4	3.38	0.13	3.77
Fidenavis SA	7	0	0	0	0	0
Germanischer Lloyd	3,071	139	5	4.53	0.16	3.60
Global Marine Bureau	512	78	9	15.23	1.76	11.54
Hellenic Register of Shipping	3	0	0	0	0	0
Honduras Bureau of Shipping	2	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.)	80	16	0	20.00	0	0
Indian Register of Shipping	127	8	0	6.30	0	0
Intermaritime Certification Services, S.A.	376	14	0	3.72	0	0
International Naval Surveys Bureau	58	5	0	8.62	0	0
International Register of Shipping	427	65	11	15.22	2.58	16.92
International Ship Classification	256	23	3	8.98	1.17	13.04
Isthmus Bureau of Shipping	513	51	5	9.94	0.97	9.80
Korea Classification Society (former Joson Classification Society)	158	40	3	25.32	1.90	7.50
Korea Ship Safety Technology Authority	52	1	0	1.92	0	0
Korean Register of Shipping	2,542	50	0	1.97	0	0
Lloyd's Register	3,456	132	4	3.82	0.12	3.03
Marconi International Marine Company Ltd.	1	0	0	0	0	0
Maritime Technical Systems and Services	47	4	0	8.51	0	0
National Cargo Bureau Inc.	1	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%
National Shipping Adjusters Inc	40	2	0	5	0	0
Nippon Kaiji Kyokai	8,725	343	19	3.93	0.22	5.54
Overseas Marine Certification Services	310	44	3	14.19	0.97	6.82
Panama Bureau of Shipping	60	12	1	20.00	1.67	8.33
Panama Maritime Documentation Services	425	44	4	10.35	0.94	9.09
Panama Maritime Surveyors Bureau Inc	46	7	0	15.22	0	0
Panama Register Corporation	61	7	0	11.48	0	0
Panama Shipping Certificate Inc.	3	0	0	0	0	0
Panama Shipping Registrar Inc.	173	12	1	6.94	0.58	8.33
Phoenix Register of Shipping	2	0	0	0	0	0
Polski Rejestr Statkow	13	0	0	0	0	0
Registro Internacional Naval S.A.	13	1	0	7.69	0	0
Registro Italiano Navale	684	30	1	4.39	0.15	3.33
RINAVE Portuguesa	5	0	0	0	0	0
Russian Maritime Register of Shipping	507	37	1	7.30	0.20	2.70
Russian River Register	1	0	0	0	0	0
Shipping Register of Ukraine	4	0	0	0	0	0
Turkish Lloyd	5	0	0	0	0	0
Union Bureau of Shipping	1,144	209	19	18.27	1.66	9.09
Universal Maritime Bureau	374	56	5	14.97	1.34	8.93
Universal Shipping Bureau	96	10	1	10.42	1.04	10.00
Vietnam Register	799	105	9	13.14	1.13	8.57
Other	565	57	9	10.09	1.59	15.79

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
Ship's certificates and documents	2,810
Stability, structure and related equipment	8,257
Propulsion and auxiliary machinery	7,166
Alarm signals	704
Fire safety measures	18,114
Oil, chemical tankers and gas carriers	284
Lifesaving appliances	12,281
Radiocommunications	3,073
Safety of navigation	17,435
Carriage of cargo and dangerous goods	661
ISM related deficiencies	3,497
SOLAS related operational deficiencies	4,930
Additional measures to enhance maritime safety	743
Bulk carriers-additional safety measures	641
Load lines	8,139
MARPOL-Annex I	5,643
MARPOL-Annex II	53
MARPOL-Annex III	37
MARPOL-Annex IV	996
MARPOL-Annex V	1,580
MARPOL-Annex VI	680
MARPOL related operational deficiencies	501
AFS Convention	24
Certification and watchkeeping for seafarers	1,692
Crew and accommodation (ILO 147)	286
Food and catering (ILO 147)	173
Working spaces (ILO 147)	1,090
Accident prevention (ILO 147)	1,012
Mooring arrangements (ILO 147)	850
Other deficiencies	197
Total	**103,549**
Maritime security related deficiencies	2,933
Grand total	**106,492**

SUMMARY OF PORT STATE INSPECTION DATA 2009 – 2011

Table 7: BLACK – GREY – WHITE LISTS *

Flag	Inspections 2009-2011	Detentions 2009-2011	Black to Grey Limit	Grey to White Limit	Excess Factor
BLACK LIST					
Sierra Leone	555	111	49		4.42
Papua New Guinea	39	11	6		4.34
Georgia	203	42	21		4.06
Korea, Democratic People's Republic	418	79	38		3.95
Cambodia	5,181	861	393		3.93
Mongolia	446	70	41		2.99
Saint Kitts and Nevis	183	28	19		2.40
Kiribati	529	65	47		2.01
Indonesia	576	70	51		2.00
Thailand	1,042	109	87		1.65
Bangladesh	57	9	8		1.59
Viet Nam	1,873	183	150		1.56
Tonga	41	7	6		1.55
GREY LIST					
Turkey	179	18	19	6	0.95
Curacao	63	7	8	1	0.84
Dominica	64	7	8	1	0.83
Belize	1,054	83	88	60	0.83
Tuvalu	453	37	41	22	0.78
Barbados	72	7	9	1	0.74
Egypt	42	3	6	0	0.51
Gibraltar (UK)	151	10	16	5	0.45
Luxemburg	38	2	6	0	0.39
India	310	20	30	14	0.39
Myanmar	42	2	6	0	0.35
Belgium	83	4	10	1	0.29
Kuwait	37	1	6	0	0.24
Saudi Arabia	44	1	6	0	0.18
Switzerland	71	2	9	1	0.13
Croatia	84	2	10	2	0.05
WHITE LIST					
Cook Islands	30	0		0	0
Maldives	35	0		0	0
Malta	1,781	106		106	-0.01
Italy	389	18		18	-0.05

Flag	Inspections 2009-2011	Detentions 2009-2011	Black to Grey Limit	Grey to White Limit	Excess Factor
Cyprus	1,474	82		87	-0.11
Taiwan, China	219	8		9	-0.12
Malaysia	733	35		39	-0.23
Antigua and Barbuda	1,465	76		86	-0.25
Saint Vincent and the Grenadines	780	37		42	-0.26
Philippines	640	27		34	-0.40
Russian Federation	887	37		49	-0.51
Panama	23,977	1,235		1,613	-0.54
Netherlands	391	13		19	-0.57
Sweden	71	0		1	-0.71
Cayman Islands (UK)	256	6		11	-0.77
Isle of Man (UK)	354	9		16	-0.84
United States	116	1		3	-0.86
Greece	872	28		48	-0.87
Marshall Islands	2,753	103		170	-0.87
Liberia	5,067	194		324	-0.90
Vanuatu	312	7		14	-0.91
Norway	640	18		34	-0.94
United Kingdom (UK)	681	19		36	-0.96
Bahamas	1,863	61		112	-0.98
Bermuda (UK)	209	3		8	-1.05
France	135	1		4	-1.07
Denmark	371	7		17	-1.14
Singapore	4,244	117		269	-1.27
Germany	769	16		42	-1.29
Japan	383	5		18	-1.42
Hong Kong, China	5,540	90		356	-1.69
Korea, Republic of	3,614	51		227	-1.75
China	2,076	17		126	-1.92

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 50.*

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 %
	2009	2010	2011	Total	2009	2010	2011	Total	
Algeria	3	5	3	11	1	0	1	2	18.18
Antigua and Barbuda	379	541	545	1,465	11	24	41	76	5.19
Argentina	6	6	3	15	0	0	0	0	0
Australia	12	9	7	28	0	0	0	0	0
Bahamas	588	610	665	1,863	22	15	24	61	3.27
Bahrain	4	2	1	7	0	0	0	0	0
Bangladesh	10	14	33	57	1	4	4	9	15.79
Barbados	19	23	30	72	0	4	3	7	9.72
Belgium	21	23	39	83	0	2	2	4	4.82
Belize	348	358	348	1,054	28	34	21	83	7.87
Bermuda (UK)	68	68	73	209	2	0	1	3	1.44
Bolivia	2	3	1	6	0	1	0	1	16.67
Brazil	1	4	3	8	1	1	1	3	37.50
Brunei Darussalam	3	7	5	15	0	0	0	0	0
Bulgaria	5	4	1	10	0	1	0	1	10.00
Cambodia	1,705	1,649	1,827	5,181	287	266	308	861	16.62
Canada	2	0	0	2	0	0	0	0	0
Cayman Islands (UK)	77	84	95	256	2	2	2	6	2.34
Chile	2	0	1	3	0	0	0	0	0
China	693	676	707	2,076	8	8	1	17	0.82
Colombia	1	0	0	1	0	0	0	0	0
Comoros	5	9	12	26	0	3	2	5	19.23
Cook Islands	12	12	6	30	0	0	0	0	0
Croatia	25	31	28	84	1	1	0	2	2.38
Curacao	25	15	23	63	4	1	2	7	11.11
Cyprus	474	500	500	1,474	27	27	28	82	5.56
Denmark	111	132	128	371	3	1	3	7	1.89
Dominica	30	20	14	64	2	3	2	7	10.94
Ecuador	1	2	2	5	0	0	1	1	20.00
Egypt	13	11	18	42	0	1	2	3	7.14
Equatorial Guinea	0	0	3	3	0	0	0	0	0
Ethiopia	5	6	7	18	1	0	1	2	11.11
Falkland Islands (UK)	1	0	3	4	0	0	0	0	0
Fiji	0	0	1	1	0	0	0	0	0
France	34	54	47	135	0	1	0	1	0.74

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2009	2010	2011	Total	2009	2010	2011	Total	
Georgia	97	67	39	203	19	14	9	42	20.69
Germany	212	279	278	769	3	5	8	16	2.08
Gibraltar (UK)	39	61	51	151	2	5	3	10	6.62
Greece	248	291	333	872	7	10	11	28	3.21
Honduras	3	1	1	5	0	0	0	0	0
Hong Kong, China	1,516	1,765	2,259	5,540	25	29	36	90	1.62
India	85	101	124	310	11	2	7	20	6.45
Indonesia	178	205	193	576	21	25	24	70	12.15
Iran	12	5	5	22	0	0	0	0	0
Ireland	1	0	3	4	0	0	0	0	0
Isle of Man (UK)	105	107	142	354	4	2	3	9	2.54
Israel	5	5	5	15	0	0	0	0	0
Italy	100	137	152	389	6	7	5	18	4.63
Jamaica	2	2	5	9	0	1	0	1	11.11
Japan	122	107	154	383	3	2	0	5	1.31
Jordan	0	1	0	1	0	0	0	0	0
Kiribati	171	193	165	529	19	28	18	65	12.29
Korea, Democratic People's Republic	110	140	168	418	24	15	40	79	18.90
Korea, Republic of	1,125	1,179	1,312	3,616	14	23	14	51	1.41
Kuwait	13	11	13	37	0	0	1	1	2.70
Latvia	0	1	0	1	0	0	0	0	0
Liberia	1,290	1,758	2,019	5,067	43	66	85	194	3.83
Libyan Arab Jamahiriya	2	7	1	10	0	0	0	0	0
Lithuania	4	5	1	10	0	1	0	1	10.00
Luxemburg	11	9	18	38	0	1	1	2	5.26
Malaysia	212	239	282	733	14	9	12	35	4.77
Maldives	14	10	11	35	0	0	0	0	0
Malta	520	554	707	1,781	38	29	39	106	5.95
Marshall Islands	721	923	1,109	2,753	31	32	40	103	3.74
Mauritius	1	0	2	3	0	0	0	0	0
Mexico	2	0	1	3	1	0	0	1	33.33
Moldova	3	2	6	11	2	0	0	2	18.18
Mongolia	160	150	136	446	26	28	16	70	15.70
Myanmar	8	19	15	42	0	1	1	2	4.76
Netherlands	111	141	139	391	1	8	4	13	3.32
New Zealand	2	2	2	6	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2009	2010	2011	Total	2009	2010	2011	Total	
Nigeria	0	1	0	1	0	0	0	0	0
Norway	185	228	227	640	6	5	7	18	2.81
Pakistan	7	6	7	20	1	0	0	1	5.00
Palau	1	0	0	1	0	0	0	0	0
Panama	7,333	7,952	8,692	23,977	385	418	432	1,235	5.15
Papua New Guinea	17	12	10	39	5	4	2	11	28.21
Peru	0	1	1	2	0	0	0	0	0
Philippines	212	213	215	640	8	8	11	27	4.22
Poland	0	1	0	1	0	0	0	0	0
Portugal	3	7	6	16	0	1	0	1	6.25
Qatar	6	10	5	21	0	0	0	0	0
Romania	0	0	1	1	0	0	0	0	0
Russian Federation	291	320	276	887	16	12	9	37	4.17
Saint Helena (UK)	0	0	1	1	0	0	0	0	0
Saint Vincent and the Grenadines	277	265	238	780	18	11	8	37	4.74
Samoa	1	7	2	10	0	0	0	0	0
Saudi Arabia	12	12	20	44	0	1	0	1	2.27
Seychelles	1	2	0	3	0	0	0	0	0
Sierra Leone	105	167	283	555	24	35	52	111	20.00
Singapore	1,200	1,380	1,664	4,244	35	38	44	117	2.76
Slovakia	8	3	0	11	2	1	0	3	27.27
Solomon Islands	0	3	1	4	0	0	0	0	0
Spain	1	1	4	6	0	0	0	0	0
Sri Lanka	3	7	7	17	0	0	0	0	0
Saint Kitts and Nevis	64	64	55	183	10	11	7	28	15.30
Sweden	21	30	20	71	0	0	0	0	0
Switzerland	28	22	21	71	1	0	1	2	2.82
Syrian Arab Republic	0	1	0	1	0	0	0	0	0
Taiwan, China	68	68	83	219	3	2	3	8	3.65
Tanzania	1	3	11	15	0	2	2	4	26.67
Thailand	335	349	358	1,042	36	35	38	109	10.46
Togo	6	8	9	23	1	0	0	1	4.35
Tonga	15	14	12	41	1	1	5	7	17.07
Tunisia	2	2	1	5	0	0	0	0	0
Turkey	54	60	65	179	9	6	3	18	10.06
Tuvalu	174	160	119	453	15	14	8	37	8.17

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2009	2010	2011	Total	2009	2010	2011	Total	
Ukraine	4	1	2	7	0	0	0	0	0
United Arab Emirates (UAE)	3	6	5	14	0	0	0	0	0
United Kingdom (UK)	176	236	269	681	5	4	10	19	2.79
United States	25	38	53	116	0	0	1	1	0.86
Vanuatu	92	104	116	312	3	3	1	7	2.24
Viet Nam	495	640	738	1,873	37	55	91	183	9.77
Ship's registration withdrawn	0	3	0	3	0	1	0	1	33.33
Total	**23,116**	**25,762**	**28,627**	**77,505**	**1,336**	**1,411**	**1,562**	**4,309**	**5.56**

Figure 14: COMPARISON OF INSPECTIONS PER SHIP TYPE

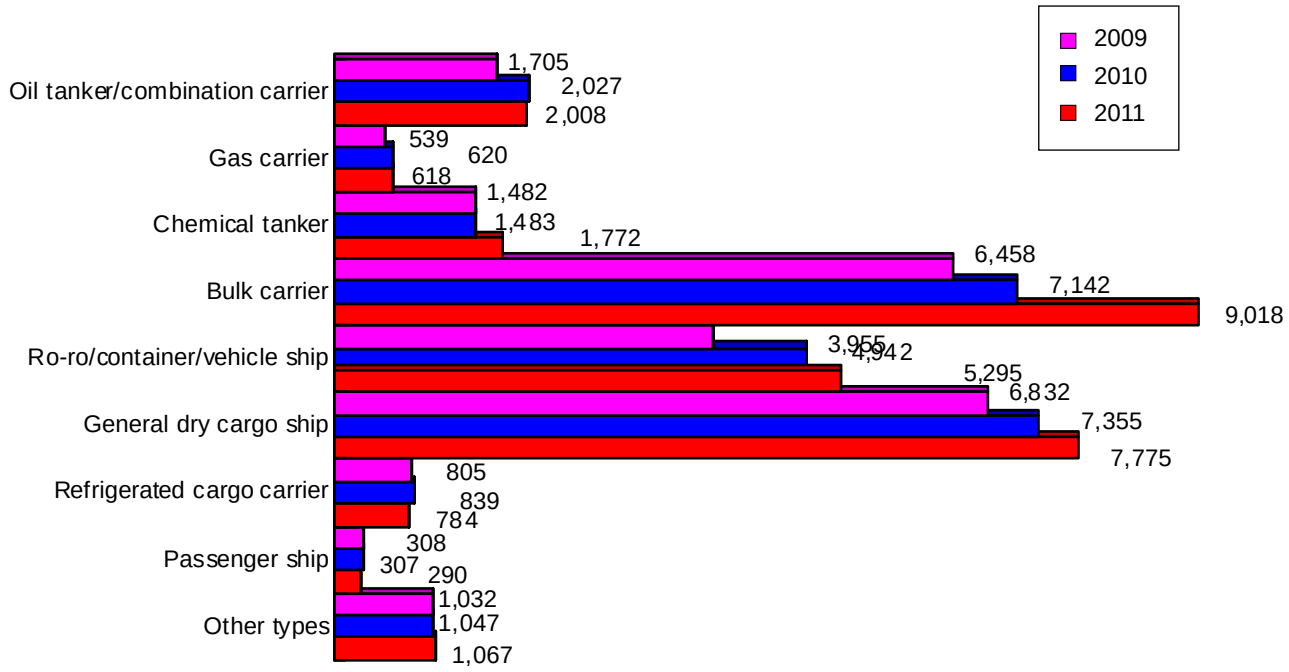


Figure 15: COMPARISON OF DETENTIONS PER SHIP TYPE

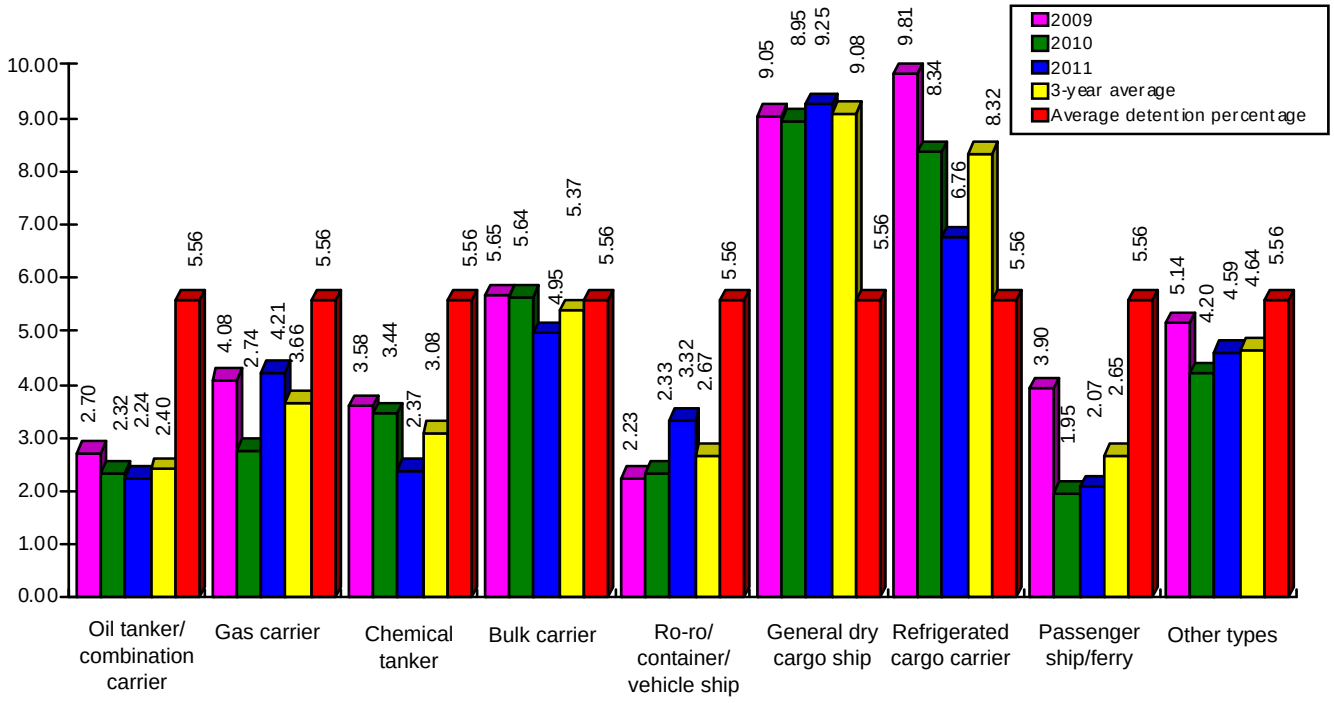
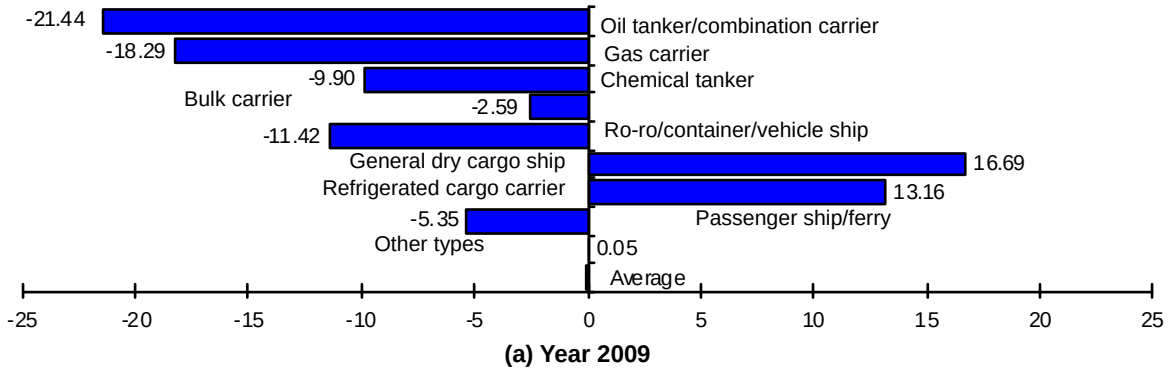


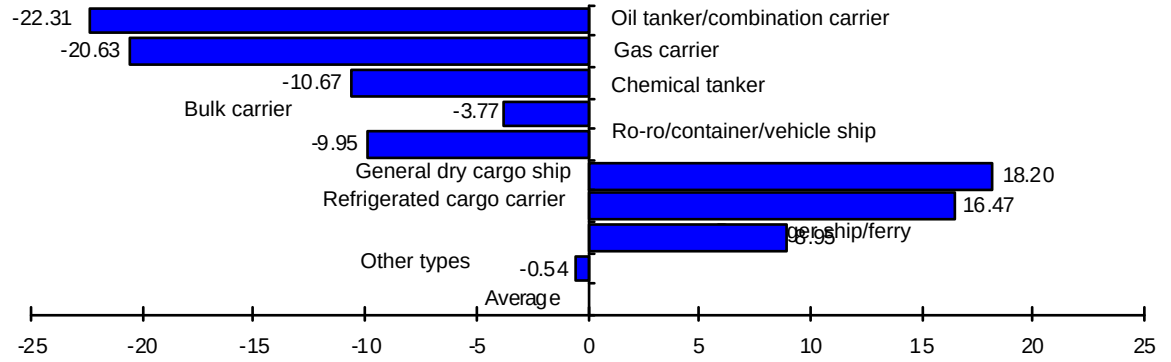
Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2009	2010	2011	Total	2009	2010	2011	Total	
NLS tanker	73	85	99	257	4	0	2	6	2.33
Combination carrier	74	107	73	254	2	5	2	9	3.54
Oil tanker	1,558	1,835	1,836	5,229	40	42	41	123	2.35
Gas carrier	539	620	618	1,777	22	17	26	65	3.66
Chemical tanker	1,482	1,483	1,772	4,737	53	51	42	146	3.08
Bulk carrier	6,458	7,142	9,018	22,618	365	403	446	1,214	5.37
Vehicle carrier	587	746	668	2,001	16	16	11	43	2.15
Container ship	3,174	3,963	4,421	11,558	67	92	151	310	2.68
Ro-Ro cargo ship	194	233	206	633	5	7	14	26	4.11
General cargo/multi-purpose ship	6,832	7,355	7,775	21,962	618	658	719	1,995	9.08
Refrigerated cargo carrier	805	839	784	2,428	79	70	53	202	8.32
Woodchip carrier	212	220	235	667	5	7	12	24	3.60
Livestock carrier	55	53	50	158	1	2	7	10	6.33
Ro-Ro Passenger ship	77	83	92	252	4	4	5	13	5.16
Passenger ship	231	224	198	653	8	2	1	11	1.68
Factory ship	1	1	1	3	0	0	0	0	0
Heavy load carrier	67	61	79	207	2	3	3	8	3.86
Offshore service vessel	126	149	115	390	2	9	3	14	3.59
MODU & FPSO	5	11	4	20	0	0	1	1	5.00
High speed passenger craft	58	57	42	157	0	0	0	0	0
Special purpose ship	47	40	49	136	0	0	0	0	0
High speed cargo craft	1	0	0	1	0	0	0	0	0
Tugboat	217	212	222	651	25	12	8	45	6.91
Others	243	243	270	756	18	11	15	44	5.82
Total	**23,116**	**25,762**	**28,627**	**77,505**	**1,336**	**1,411**	**1,562**	**4,309**	**5.56**

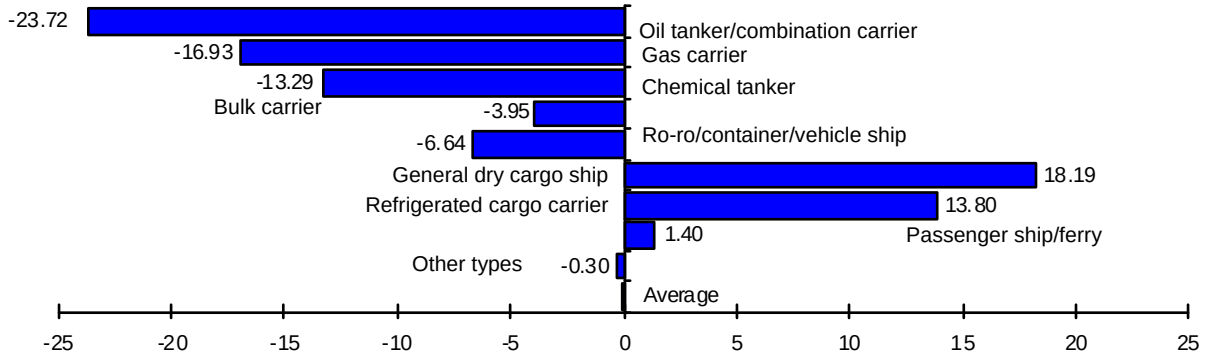
Figure 16: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE



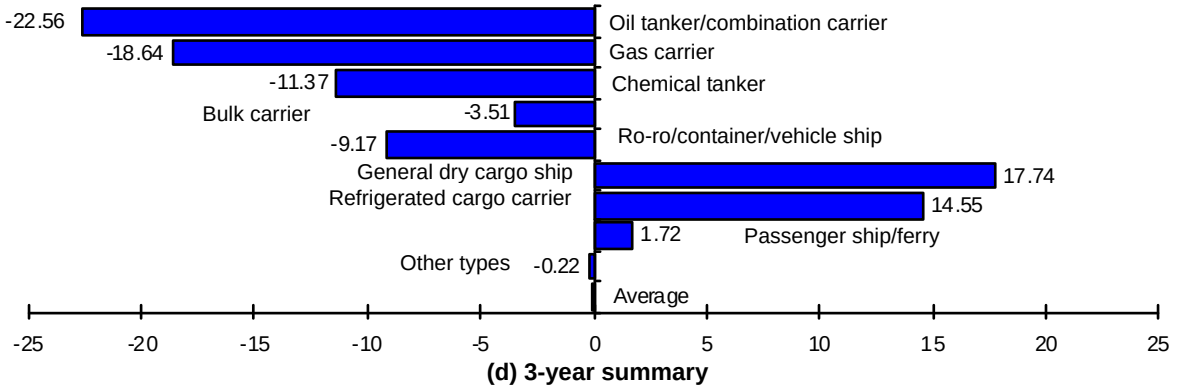
(a) Year 2009



(b) Year 2010



(c) Year 2011



(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 %
	2009	2010	2011	Total	2009	2010	2011	Total	
Oil tanker/combination carrier	1,705	2,027	2,008	5,740	772	852	832	2,456	42.79
Gas carrier	539	620	618	1,777	261	271	298	830	46.71
Chemical tanker	1,482	1,483	1,772	4,737	842	796	919	2,557	53.98
Bulk carrier	6,458	7,142	9,018	22,618	4,141	4,326	5,519	13,986	61.84
Ro-ro/container/vehicle ship	3,955	4,942	5,295	14,192	2,187	2,688	3,098	7,973	56.18
General dry cargo ship	6,832	7,355	7,775	21,962	5,698	6,071	6,480	18,249	83.09
Refrigerated cargo carrier	805	839	784	2,428	643	678	619	1,940	79.90
Passenger ship	308	307	290	905	189	225	193	607	67.07
Other types	1,032	1,047	1,067	3,146	689	668	692	2,049	65.13
Total	**23,116**	**25,762**	**28,627**	**77,505**	**15,422**	**16,575**	**18,650**	**50,647**	**65.35**

Table 11: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2009-2011	No. of overall detentions 2009-2011	No. of RO responsible detentions 2009-2011	3-year avergae detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Alfa Register of Shipping	25	0	0	0	0	0
American Bureau of Shipping	7,025	226	13	3.22	0.19	5.75
Belize Maritime Bureau Inc.	89	7	0	7.87	0	0
Belize Register Corporation	1	0	0	0	0	0
Biro Klasifikasi Indonesia	270	47	4	17.41	1.48	8.51
Bulgarski Koraben Registar	4	1	0	25.00	0	0
Bureau Securitas	15	0	0	0	0	0
Bureau Veritas	7,351	381	15	5.18	0.20	3.94
Ceskoslovensky Lodin Register	7	2	0	28.57	0	0
China Classification Society	6,645	95	3	1.43	0.05	3.16
China Corporation Register of Shipping	1,000	86	3	8.60	0.30	3.49
Compania Nacional de Registro e Inspeccion de Naves	1	0	0	0	0	0
Cosmos Marine Bureau	39	2	0	5.13	0	0
Croatian Register of Shipping	109	6	2	5.50	1.83	33.33
Cyprus Bureau of Shipping	11	0	0	0	0	0
Det Norske Veritas	8,432	281	12	3.33	0.14	4.27
Fidenavis SA	32	1	0	3.13	0	0
Germanischer Lloyd	7,784	305	12	3.92	0.15	3.93
Global Marine Bureau	1,833	274	34	14.95	1.85	12.41
Hellenic Register of Shipping	28	4	0	14.29	0	0
Honduras Bureau of Shipping	3	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	4	0	0	0	0	0
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	412	61	5	14.81	1.21	8.20
Indian Register of Shipping	321	19	1	5.92	0.31	5.26
Intermaritime Certification Services, S.A.	972	79	5	8.13	0.51	6.33
International Naval Surveys Bureau	174	13	1	7.47	0.57	7.69
International Register of Shipping	1,256	199	29	15.84	2.31	14.57
International Ship Classification	1,024	114	21	11.13	2.05	18.42
Isthmus Bureau of Shipping	1,484	164	23	11.05	1.55	14.02
Korea Classification Society (former Joson Classification Society)	405	79	12	19.51	2.96	15.19
Korea Ship Safety Technology Authority	143	2	0	1.40	0	0
Korean Register of Shipping	6,825	171	5	2.51	0.07	2.92
Lloyd's Register	9,313	352	20	3.78	0.21	5.68
Marconi International Marine Company Ltd.	5	0	0	0	0	0
Maritime Technical Systems and Services	173	20	4	11.56	2.31	20.00
National Cargo Bureau Inc.	5	0	0	0	0	0
National Shipping Adjusters Inc	75	6	0	8.00	0	0
Nippon Kaiji Kyokai	23,877	915	70	3.83	0.29	7.65
NV Unitas	4	1	0	25.00	0	0
Overseas Marine Certification Services	716	121	11	16.90	1.54	9.09
Panama Bureau of Shipping	191	20	3	10.47	1.57	15.00
Panama Maritime Documentation Services	825	104	10	12.61	1.21	9.62
Panama Maritime Surveyors Bureau Inc	376	56	2	14.89	0.53	3.57

Recognized organization (RO)	No. of overall inspections 2009-2011	No. of overall detentions 2009-2011	No. of RO responsible detentions 2009-2011	3-year avergae detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Panama Register Corporation	194	22	0	11.34	0	0
Panama Shipping Certificate Inc.	10	1	0	10.00	0	0
Panama Shipping Registrar Inc.	543	65	3	11.97	0.55	4.62
Phoenix Register of Shipping	2	0	0	0	0	0
Polski Rejestr Statkow	69	4	0	5.80	0	0
Registro Internacional Naval S.A.	31	4	1	12.90	3.23	25.00
Registro Italiano Navale	1,580	88	1	5.57	0.06	1.14
RINAVE Portuguesa	12	1	0	8.33	0	0
Russian Maritime Register of Shipping	1,606	125	6	7.78	0.37	4.80
Russian River Register	4	0	0	0	0	0
Shipping Register of Ukraine	9	2	0	22.22	0	0
Sociedad Classificadora de Colombia	1	0	0	0	0	0
Societe Generale de Surveillance	1	0	0	0	0	0
Turkish Lloyd	27	6	0	22.22	0	0
Union Bureau of Shipping	3,140	551	96	17.55	3.06	17.42
Universal Maritime Bureau	1,075	161	25	14.98	2.33	15.53
Universal Shipping Bureau	295	28	1	9.49	0.34	3.57
Vietnam Register	2,050	224	26	10.93	1.27	11.61
Other	1,288	172	30	13.35	2.33	17.44

See also the note in page 29.

Table 12: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2009-2011	No. of RO responsible detentions 2009-2011	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Union Bureau of Shipping	3,140	96	76	49	1.58	Low
Korea Classification Society (former Joson Classification Society)	405	12	13	3	0.88	Medium
International Register of Shipping	1,256	29	34	16	0.72	
Universal Maritime Bureau	1,075	25	30	13	0.72	
Maritime Technical Systems and Services	173	4	7	0	0.58	
International Ship Classification	1,024	21	28	13	0.53	
Croatian Register of Shipping	109	2	5	0	0.47	
Panama Bureau of Shipping	191	3	8	0	0.39	
Global Marine Bureau	1,833	34	47	26	0.37	
Biro Klasifikasi Indonesia	270	4	10	1	0.34	
Overseas Marine Certification Services	716	11	21	8	0.25	
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	412	5	13	3	0.19	
International Naval Surveys Bureau	174	1	7	0	0.15	
Isthmus Bureau of Shipping	1,484	23	39	20	0.14	
Panama Maritime Documentation Services	825	10	24	9	0.04	
Panama Register Corporation	194	0	8	0	-0.17	High
Panama Maritime Surveyors Bureau Inc	376	2	12	3	-0.22	
Vietnam Register	2,050	26	52	30	-0.23	
Universal Shipping Bureau	295	1	10	1	-0.25	
Indian Register of Shipping	321	1	11	2	-0.39	
Panama Shipping Registrar Inc.	543	3	17	5	-0.51	
Intermaritime Certification Services, S.A.	972	5	27	12	-0.88	
China Corporation Register of Shipping	1,000	3	28	12	-1.27	
Russian Maritime Register of Shipping	1,606	6	42	22	-1.32	
Nippon Kaiji Kyokai	23,877	70	514	441	-1.67	
Lloyd's Register	9,313	20	209	164	-1.73	
Bureau Veritas	7,351	15	167	127	-1.74	
American Bureau of Shipping	7,025	13	160	121	-1.76	
Germanischer Lloyd	7,784	12	176	135	-1.80	

Recognized organization (RO)	No. of overall inspections 2009-2011	No. of RO responsible detentions 2009-2011	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Det Norske Veritas	8,432	12	190	147	-1.82	
Registro Italiano Navale	1,580	1	41	22	-1.84	
Korean Register of Shipping	6,825	5	156	117	-1.90	
China Classification Society	6,645	3	152	114	-1.93	

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

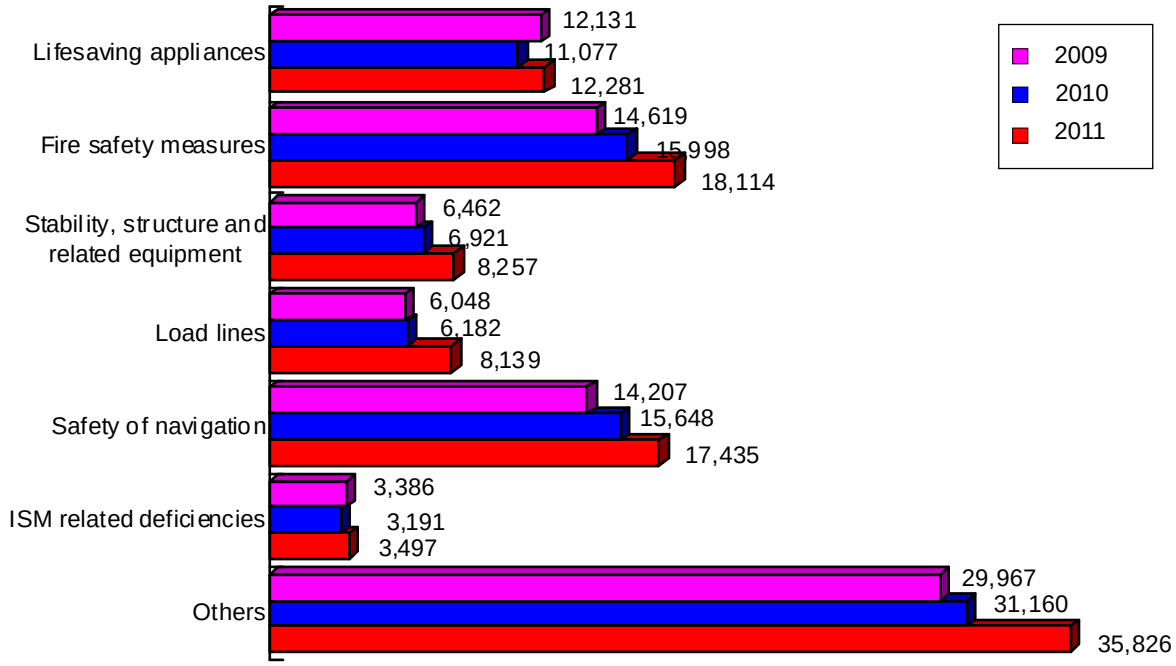


Table 13: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency	Number of deficiencies		
	2009	2010	2011
Ship's certificates and documents	2,399	2,479	2,810
Stability, structure and related equipment	6,462	6,921	8,257
Propulsion and auxiliary machinery	5,723	6,238	7,166
Alarm signals	533	664	704
Fire safety measures	14,619	15,998	18,114
Oil, chemical tankers and gas carriers	258	236	284
Lifesaving appliances	12,131	11,077	12,281
Radiocommunications	3,354	3,015	3,073
Safety of navigation	14,207	15,648	17,435
Carriage of cargo and dangerous goods	496	589	661
ISM related deficiencies	3,386	3,191	3,497
SOLAS related operational deficiencies	4,132	4,073	4,930
Additional measures to enhance maritime safety	822	888	743
Bulk carriers-additional safety measures	379	486	641
Load lines	6,048	6,182	8,139
MARPOL-Annex I	4,452	4,403	5,643
MARPOL-Annex II	64	47	53
MARPOL-Annex III	12	92	37
MARPOL-Annex IV	727	879	996
MARPOL-Annex V	1,341	1,336	1,580
MARPOL-Annex VI	312	508	680
MARPOL related operational deficiencies	440	477	501
AFS Convention	21	12	24
Certification and watchkeeping for seafarers	1,398	1,595	1,692
Crew and accommodation (ILO 147)	305	326	286
Food and catering (ILO 147)	151	172	173
Working spaces (ILO 147)	866	899	1,090
Accident prevention (ILO 147)	712	800	1,012
Mooring arrangements (ILO 147)	863	793	850
Other deficiencies	207	153	197
Total	**86,820**	**90,177**	**103,549**
Maritime security related deficiencies	2,011	2,750	2,933
Grand total	**88,831**	**92,927**	**106,492**

Figure 18: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

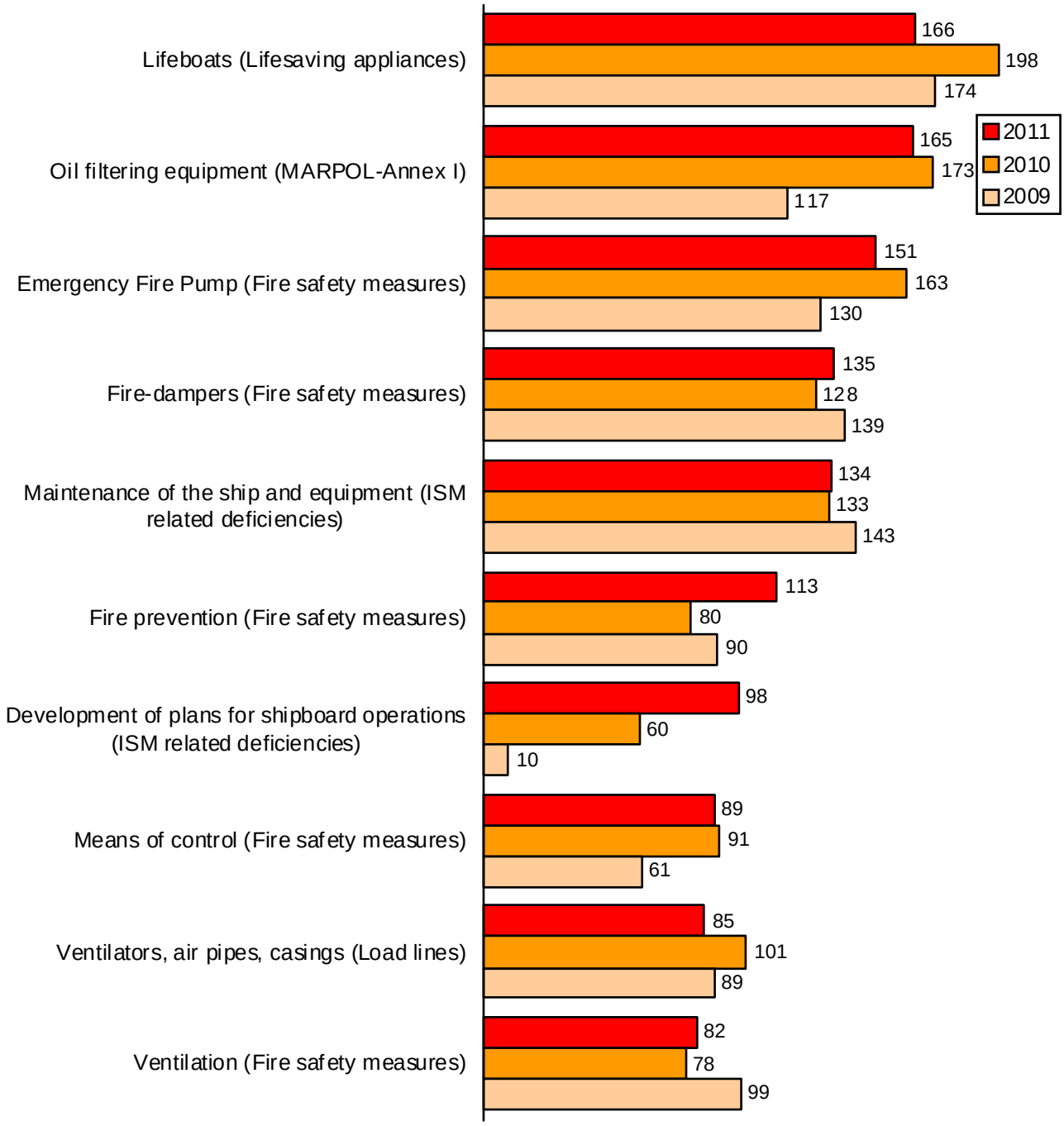
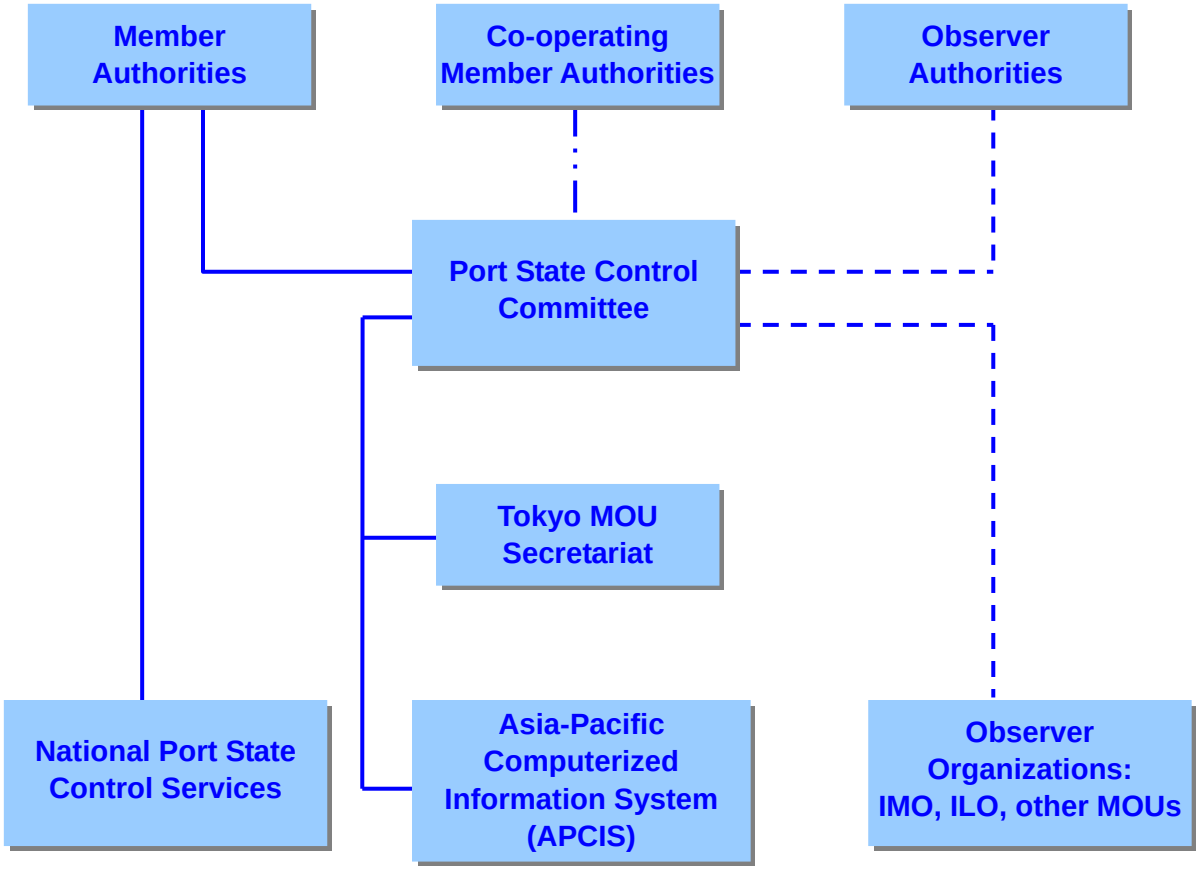


Table 14: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

No.	Most frequent deficiencies	Year		
		2009	2010	2011
1	Lifeboats (Lifesaving appliances)	174	198	166
2	Oil filtering equipment (MARPOL-Annex I)	117	173	165
3	Emergency Fire Pump (Fire safety measures)	130	163	151
4	Fire-dampers (Fire safety measures)	139	128	135
5	Maintenance of the ship and equipment (ISM related deficiencies)	143	133	134
6	Fire prevention (Fire safety measures)	90	80	113
7	Development of plans for shipboard operations (ISM related deficiencies)	10	60	98
8	Means of control (Fire safety measures)	61	91	89
9	Ventilators, air pipes, casings (Load lines)	89	101	85
10	Ventilation (Fire safety measures)	99	78	82

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:

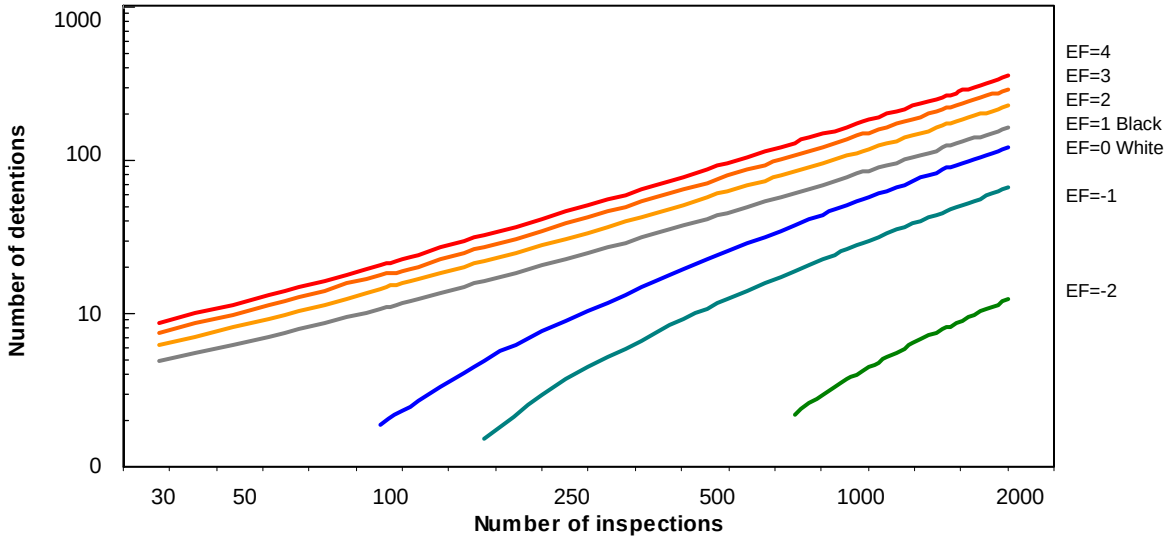
$$u_{black-to-grey} = N \cdot p + 0.5 + z \cdot \sqrt{N \cdot p \cdot (1-p)}$$

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

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 Sierra Leone were subject to 555 inspections of which 111 resulted in a detention. The "black to grey limit" is 49 detentions. The excess factor is 4.42.

N = total inspections
P = 7%
Q= 3%
Z = 1.645

How to determine the black to grey limit:

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

$$u_{black-to-grey} = 555 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{555 \cdot 0.07 \cdot 0.93}$$

$$u = 49$$

The excess factor is 4.42. 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 3.42, and the outcome has to be added to the normal value for ‘p’:

$$p + 3.42q = 0.07 + (3.42 \cdot 0.03) = 0.1726$$

$$u_{excessfactor} = 555 \cdot 0.1726 + 0.5 + 1.645 \cdot \sqrt{555 \cdot 0.1726 \cdot 0.8274}$$

$$u_{excessfactor} = 111$$

Example flag on Grey list:

Ships of Turkey were subject to 179 inspections, of which 18 resulted in a detention. The "black to grey limit" is 19 and the "grey to white limit" is 6. The excess factor is 0.95.

How to determine the black to grey limit:

$$u_{black-to-grey} = 179 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{179 \cdot 0.07 \cdot 0.93}$$

$$u_{black\text{-}to\text{-}grey} = 19$$

How to determine the grey to white limit:

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

$$u_{white-to-grey} = 179 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{179 \cdot 0.07 \cdot 0.93}$$

$$u_{white\text{-}to\text{-}grey} = 6$$

To determine the excess factor the following formula is used:

ef = (Detentions – white to grey limit)/(grey to black limit – white to grey limit)

ef = (18-6.41)/(18.65-6.41)

ef = 0.95

Example flag on White list:

Ships of the Marshall Islands were subject to 2,753 inspections of which 103 resulted in detention. The "grey to white limit" is 170 detentions. The excess factor is -0.87.

How to determine the grey to white limit:

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

$$u_{white-to-grey} = 2{,}753 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{2{,}753 \cdot 0.07 \cdot 0.93}$$

$u_{white\text{-}to\text{-}grey} = 170$

The excess factor is -0.87. 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 -0.87, and the outcome has to be added to the normal value for ‘p’:

$p + (-0.87) = 0.07 + (-0.87 \cdot 0.03) = 0.0439$

$$u_{excessfactor} = 2{,}753 \cdot 0.0439 - 0.5 - 1.645 \cdot \sqrt{2{,}753 \cdot 0.0439 \cdot 0.9561}$$

$u_{excessfactor} = 103$

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.

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