

ANNUAL REPORT

ON

PORT STATE CONTROL

IN THE ASIA-PACIFIC REGION

2009



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FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2009**.

Tokyo MOU has achieved significant progress and development in port State control in the Asia-Pacific region during the past fifteen years. The member Authorities of Tokyo MOU have made great efforts to enhance capability and activity on port State control. Tokyo MOU has developed and implemented comprehensive technical co-operation programmes which prove very successful and effective. Tokyo MOU has maintained an advanced and efficient database system which provides information tools for PSC inspections and useful supports for PSC data exchange.

This annual report outlines the port State control developments and activities of Tokyo MOU in 2009. Furthermore, the report also provides port State control statistics and analyses which summarize the results of inspections carried out by the member Authorities during the year.

Ideally, Port State control would not continue forever. However, to achieve the ultimate goal of elimination of substandard ships, enduring and incessant efforts by all parties concerned are still required, under which circumstances port State control has an important role to play. Tokyo MOU will continue to take vigorous measures and to increase pressure on substandard ships so as to promote the maritime safety, security, protection of the marine environment and to ensure proper living and working condition onboard.

Vitaly Klyuev
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 fifteenth issue and covers port State control activities and developments in the year 2009.

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 Vietnam. 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 Vietnam.

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 and also observers from the maritime Authorities and the inter-governmental organizations which have been granted observer status by the Committee, namely: 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 2009

The member Authorities of Tokyo MOU carried out 23,116 PSC inspections in 2009. This is the fourteenth time that broke the previous year's record of number of inspections since the establishment of Tokyo MOU. Tokyo MOU continues its strong commitment and dedicated efforts to enhance and harmonize port State control activities in the region.

The concentrated inspection campaign (CIC) on lifeboat launching arrangements was conducted from 1 September to 30 November 2009. Again, it is a joint CIC held with the Paris MOU and participated by other regional PSC regimes as well. The purpose of the CIC was to increase awareness of lifeboat related safety issues and to gather more information thereon. This CIC focused on whether lifeboats and associated launching arrangements are well maintained and whether the crew are aware of the maintenance requirements and of possible dangers of launching and recovering lifeboats. During the 3-month campaign period, the Tokyo MOU member Authorities carried out 4,834 CIC inspections. Based on the preliminary analysis, 18.2% of inspections revealed CIC-related deficiencies. A total of 1,764 CIC-related deficiencies were recorded. The campaign revealed that almost 12% of drills, when conducted, were not performed satisfactorily, which often proved a result of inadequate training. Furthermore, the procedures or instructions and identification of hazards associated with launching and recovery of lifeboats were found unsatisfactory on 14.8% of vessels inspected. These are related to the safety management system on board the ship. Of a total number of 332 ships detained during the CIC period, 123 or 37% were due to serious deficiencies on the

lifeboat launching appliances and arrangements. This represents a detention rate for the CIC of 2.54%, while the overall detention rate during the same period is 5.35%.

Tokyo MOU had adopted guidelines for the responsibility assessment of the recognized organization (RO) and has published the names of ROs which were found responsible for the detainable deficiencies in the detention list since 2002. For the purpose of promoting transparency of PSC activities, Tokyo MOU, in co-ordination with the Paris MOU, published the criteria for attribution of RO responsibility on the MOU web-site. Now everyone can clearly understand the reason why the RO was attributed responsibility for the detention.

THE PORT STATE CONTROL COMMITTEE

The nineteenth meeting of the Port State Control Committee was held in Port Moresby, Papua New Guinea, from 24 to 27 August

2009. The meeting was hosted by the National Maritime Safety Authority of Papua New Guinea. Dr. Vitaly Klyuev, Deputy Director of the Department of State Policy for Maritime and River Transport, Ministry of Transport of the Russian Federation, chaired the meeting.

The nineteenth Committee meeting was attended by representatives of the member Authorities of Australia, 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, and observers from DPR Korea, Macao (China), the United States Coast Guard, the Black Sea MOU and the Viña del Mar Agreement.

The Committee was informed of the work done by the inter-sessional working group on strategy. A draft strategic plan prepared by the inter-sessional group was discussed at an ad hoc group meeting first and then forwarded to



The nineteenth Committee meeting, Port Moresby, August 2009.

the Committee for consideration. The Committee considered the draft strategic plan and approved it in principle. The Committee instructed the inter-sessional working group to further develop the related strategic directions and the action plan. The Committee agreed to formally adopt the strategic plan and approve the strategic directions and the action plan at the next meeting.

The Committee considered and approved the report of the CIC on safety of navigation (SOLAS Chapter V) in 2008, which provided analysis of the results, recommendations and conclusions of the CIC. The Committee confirmed the final arrangements for the joint CIC on lifeboat launching arrangements in 2009. The Committee decided to carry out a CIC on International Maritime Dangerous Goods (IMDG) Code and MARPOL Annex III from September to November 2010. The Committee agreed that the CIC on the International Fire Safety System (FSS) Code would be conducted in 2011 and the CIC on MARPOL Annex IV would be arranged for 2012. The Committee established an inter-sessional group to prepare the questionnaire and guidelines for the CIC in 2010 and also to look into the CICs in 2011 and 2012.

For providing uniform guidance on verifying compliance with requirements on long range identification and tracking (LRIT), the Committee adopted an interim guidance on LRIT. The Committee was informed of the progress made by the joint Tokyo MOU and Paris MOU working group on coding system. The Committee approved in principle the proposed specifications of the revised coding system and the relevant procedure for codes implementation, amendments and maintenance.

The Committee considered the updated version of the document of framework of the Tokyo MOU Secretariat and approved it. The Committee reviewed and made amendments to the Rule 4 of the rules of procedure of the Committee: the introduction of the vice chairman who can take over the responsibilities of the chairman when the chairman is unable to carry out his duties. Based on the amended Rule 4, Mr. Ong Hua Siong, Assistant Director (Ship Regulation and Development/Port State Control), Shipping Division, Maritime and Port Authority of Singapore, was elected as the Vice Chairman of the Committee and Mr. Ning Bo, Section Chief for PSC, China Maritime Safety Administration, was elected as the Vice Chairman of the Technical Working Group (TWG).

In addition, the following issues were also dealt with by the Committee:

- consideration of the application for Co-operating Member status by the Marshall Islands;
- review of list of follow-up actions emanating from the second Joint Ministerial Conference;
- revision of the questionnaire on national arrangement for PSC by the member Authorities;
- analysis of data on ship targeting factor usage;
- preliminary proposals for the next five-year plan of technical co-operation programmes; and

- development of award for the deficiency photo of the year.

The twentieth meeting of the Port State Control Committee will be held in Viet Nam in June 2010.

TECHICAL WORKING GROUP (TWG)

The second meeting of the Technical Working Group (TWG) was convened in Port Moresby, Papua New Guinea, from 21 to 22 August 2009, preceding the nineteenth meeting of the Committee. The TWG02 meeting was chaired by Mr. Christopher Lindesay, Principal System 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;
- 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;
- amendments to the codes;

- detailed statistics on PSC;
- information exchange with other regional PSC databases; and
- reports 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.

In 2009, a new function for collecting and displaying pictures on deficiencies was implemented in the APCIS system. Using this tool, PSC officers are able to attach pictures corresponding to the deficiencies recorded to the inspection report.

For inter-regional information exchange, the APCIS has established deep hyperlink with the databases of:

- SIRENAC of the Paris MOU;
- BSIS of the Black Sea MOU; and
- IOIS of the Indian Ocean MOU.

TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS

The nineteenth basic training course for PSC officers was held in Yokohama, Japan, from 29 June to 17 July 2009. This was the fifth joint training course organized by IMO and Tokyo MOU. A total of 18 PSC officers participated in the training course. Thirteen of them were from the Tokyo MOU Authorities of Chile, China, Indonesia, Republic of Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, the Russian Federation, Thailand and Viet Nam. The other 5 were each from Abuja MOU, the Viña del Mar Agreement, Caribbean MOU, Indian Ocean MOU and Mediterranean MOU, invited by IMO. The course was conducted with the assistance by the Shipbuilding Research Center of Japan (SRC).

The basic training course aims to provide junior or newly recruited PSC officers with necessary knowledge on maritime conventions and essential port State control procedures and requirements. During the training course, trainees received a wide range of lectures and presentations relating to port State control provisions, convention requirements and regulations, PSC inspection and reporting procedures. Experts from SRC, Nippon Kaiji Kyokai (ClassNK), Ministry of

Land, Infrastructure, Transport and Tourism of Japan (MLIT) and the Secretariat delivered lectures on the relevant subjects. Apart from the classroom lectures, onboard training was conducted in Yokohama, Nagoya and Kobe respectively for the trainees to gain practical experience on PSC inspections. Moreover, a technical visit to a liferaft manufacturer was



Training course for PSC officers

also arranged.

The seventeenth seminar for PSC officers was held in Bangkok, Thailand, from 8 to 11 June 2009. The seminar was hosted by the Marine Department of Thailand. Participants from Authorities of Australia, Canada, Chile, China, Hong Kong (China), Indonesia, Japan, DPR Korea, Republic of Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand and Viet Nam attended the seminar.

During the seminar, an expert from ILO made a comprehensive introduction about the Maritime Labour Convention (MLC) 2006 and



On-the-job training

the related PSC guidelines. An expert from the Australian Maritime Safety Authority (AMSA) delivered an informative and instructive presentation on the CIC on lifeboat launching arrangements. Other topics of the seminar were the recent development and activities of the Tokyo MOU, recording IMO company data in the APCIS, the additional guidance for inspection of unauthorized discharge bypass and PSC in Thailand. Moreover, two case study sessions were carried out where the actual cases provided by Authorities or reviewed by the detention review panel were discussed.

Four fellowship trainings were conducted in 2009. Five PSC officers participated in the training in China from 16 to 26 June 2009: two officers from DPR Korea and one from Viet Nam were trained in Dalian,

while one officer from Republic of Korea and another one from the Philippines were trained in Shanghai. Two PSC officers, one from China and the other from Malaysia, attended the fellowship training in Pusan, Republic of Korea, from 30 June to 10 July 2009. The Russian Federation received one PSC officer from China for the fellowship training in Nakhodka from 10 to 21 August 2009. From 16 to 30 October 2009, a total of 10 PSC officers from the ten different Authorities: Chile,

China, Fiji, Indonesia, Republic of Korea, Malaysia, the Philippines, the Russian Federation, Thailand and Viet Nam; participated in the fellowship training in Japan. Participants, being divided into five groups, took part in onboard training separately in Yokohama, Nagoya, Osaka, Kobe or



On-the-job training

Hiroshima.

The expert mission was organized twice in the Philippines: in Manila and Davao, from 19 to 23 January 2009 and from 26 to 30 October 2009 respectively. Both missions focusing on onboard training were conducted by experts from Japan. Malaysia held one expert mission training in Port Klang from 2 to 13 November 2009 and two Japanese experts were dispatched. One more expert mission was carried out in Can Tho, Viet Nam, from 9 to 19 November 2009. This mission was conducted by the experts of Republic of Korea.

Six PSC officer exchanges were completed in 2009: one PSC officer from Canada to Japan,



Fellowship training for PSC officers

one from Hong Kong (China) to New Zealand, one from New Zealand to Canada, one from Singapore to China, one from Australia to Republic of Korea and one from Japan to 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 and Singapore.



The seventeenth seminar for PSC officers

The above technical co-operation programmes are fully supported and actively participated by all Authorities. The Nippon Foundation kindly provides the continuous financial assistance to the Tokyo MOU technical co-operation activities.

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:

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

The Fourth Workshop for Regional Port State Control (PSC) Agreement Secretaries and Directors of Information Centres was held from 28 to 30 January 2009 at the IMO headquarters. Representatives from the regional PSC agreements and observers from some flag States and industry organizations participated in the workshop. The major issues discussed at the workshop were IMO activities related to PSC, update on activities and decision by the regional PSC agreements, development of regional information systems and training activities.

As one of the inter-governmental organizations (IGO) associated with IMO, Tokyo MOU had attended the meetings of the Flag State Implementation (FSI) Sub-Committee since 2006. The Tokyo MOU Secretariat was present at the seventeenth session of FSI in April 2009.

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

Tokyo MOU has established and maintained 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 2009, continuous efforts and further co-ordinated actions by the two Memoranda were made on the following:

- co-operation on arrangement and preparation for the CIC on lifeboat launching arrangements in 2009 and issuing a joint press release of the CIC;
- continuous submissions to IMO of annual list of flags targeted by the Paris MOU, Tokyo MOU and the United States Coast Guard and the updated list of follow-up actions emanating from the 2nd Ministerial Declaration;
- review of PSC coding system for further improvement and harmonization; and
- publication of criteria for attribution of RO responsibility.

Progress has been made in the project for technical co-operation with other regions. As a neighbouring MOU, the Indian Ocean MOU

has become the first regional regime to take advantage of that technical co-operation. With the full collaboration and support by the Indian Ocean MOU Secretariat and relevant Authorities, a PSC training course was organized in the Islamic Republic of Iran from 14 to 25 November 2009. Experts from two Tokyo MOU Authorities, Australia and Japan, and an officer from the Tokyo MOU Secretariat were dispatched for conducting the training course. Two more courses would be organized in different Authorities in that region in the next two years. The project for technical co-operation with other regions is implemented with the financial support by the Nippon Foundation.



PSC training course for Indian Ocean MOU

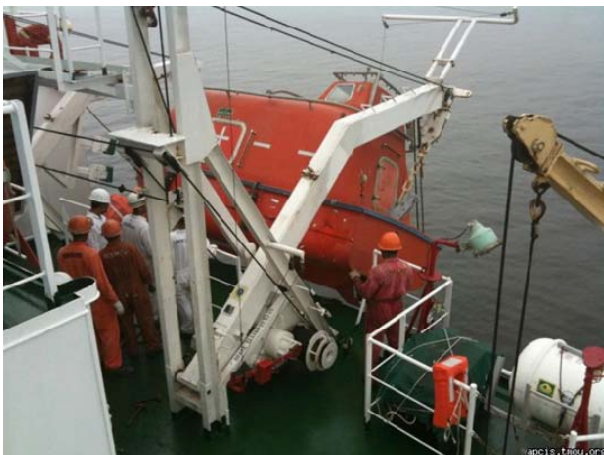
PORT STATE CONTROL UNDER THE TOKYO MOU, 2009

INSPECTIONS

In 2009, 23,116 inspections, involving 13,298 individual ships, were carried out on ships registered under 102 flags. Figure 2 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. Out of 23,116 inspections, there were 15,422 inspections where ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 21,827*, the inspection rate in the region was approximately 61%** in 2009 (see Figure 1). Although both the number of inspections and the number ships inspected have increased, the inspection rate has dropped down due to the big increase of the number of individual ships in the region.

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.



* Data source: LMIU.

** 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 2009, 1,336 ships registered under 58 flags were detained because of serious deficiencies found onboard. The detention rate of ships inspected was 5.78%. Comparing with the last year, detentions dropped 192 by number or 13% 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. 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 2007-2008 consists of 62 flags, whose ships were involved in 30 or more inspections during the period. The number of flags in the black list remains 13 for four years. Sierra Leone and Georgia reciprocally changed their positions with each other but still keep as the first and the second worst flags. Papua New Guinea is shown in the black list as the new comer due to its significant detentions in 2009. With zero detention in 2009, Maldives moves itself to the grey list. The grey list consists of 22 flags, 4 more than last year. It is discouraging that there are only 27 flags in the white list. Italy, Malta and Switzerland are downgraded to the grey 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 86,820 deficiencies were recorded in 2009. 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 are the three major categories of deficiencies which are frequently discovered on ships. In 2009, 14,619 fire safety measures related deficiencies, 14,207 safety of navigation related deficiencies and 12,131 life-saving appliances related deficiencies were recorded, representing nearly 50% of the total number of deficiencies.

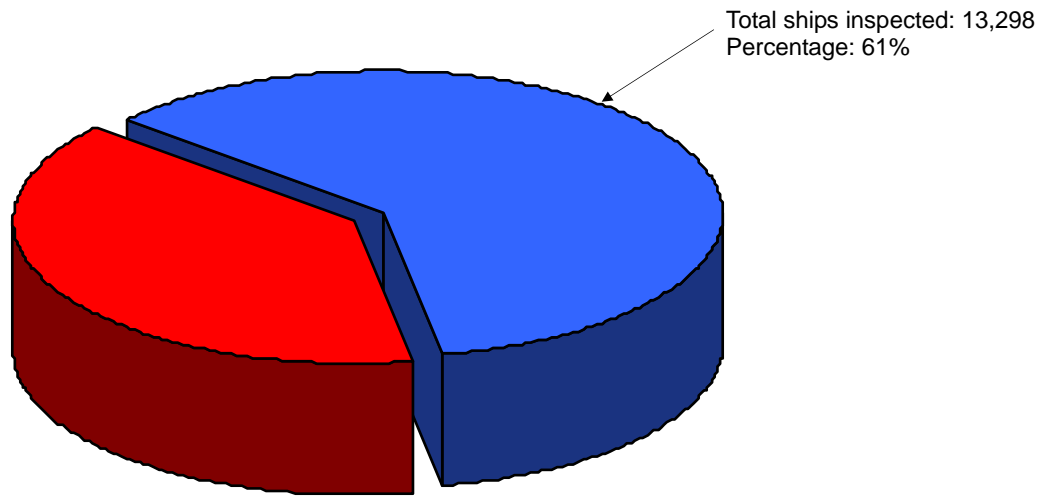


Comparing with the last year, the number of life-saving appliances related deficiencies increased by about 6% while the number of deficiencies on safety of navigation decreased by around 8%. This shows the correlation with the subject of the CIC of the year.

**OVERVIEW OF PORT STATE CONTROL
RESULTS 1999 – 2009**

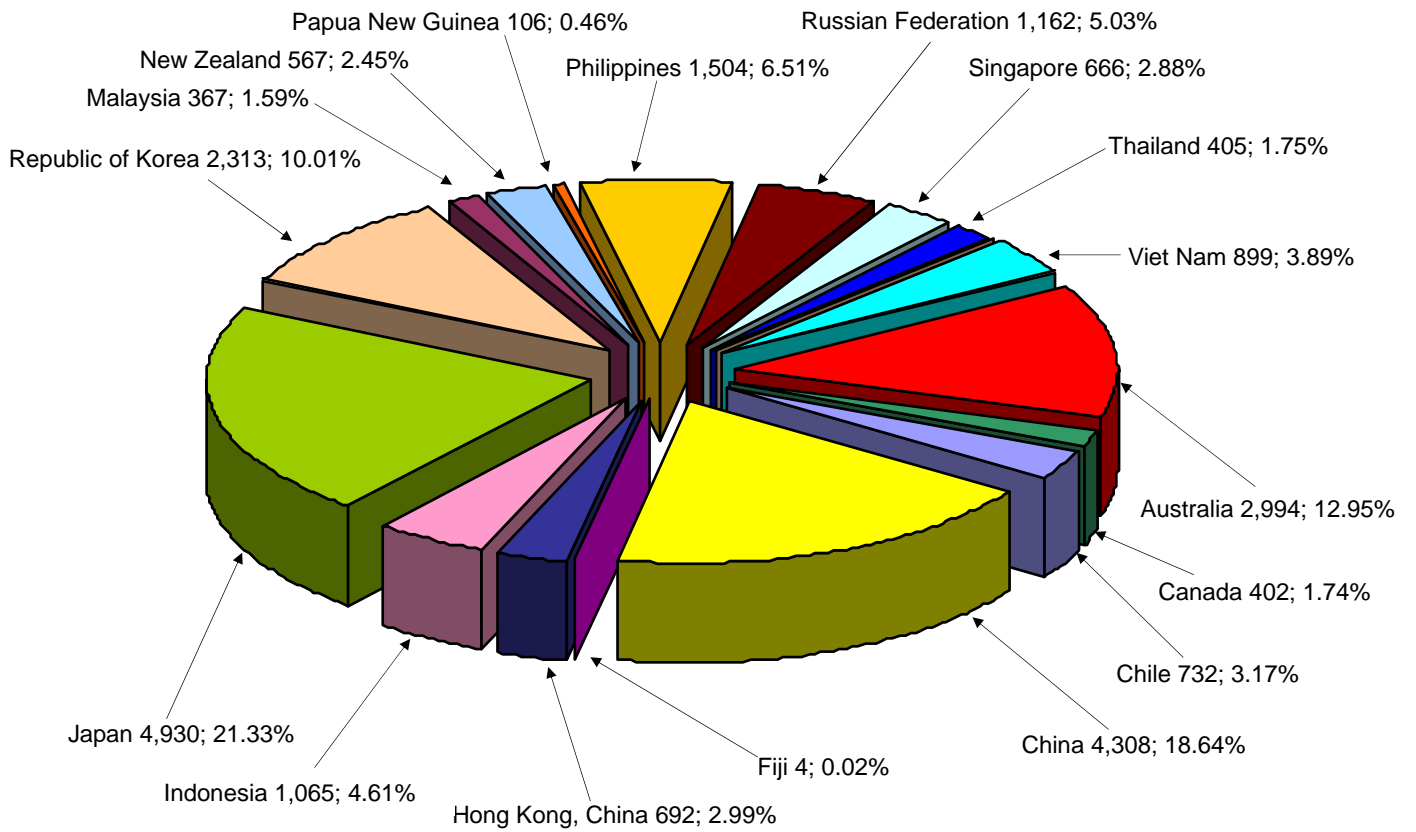
Figures 8-13 show the comparison of port State inspection results for 1999 - 2009. These figures indicate the trends in port State activities and ship performance over the past eleven years.

Figure 1: INSPECTION PERCENTAGE 2009



Total individual ship visited: 21,827

Figure 2: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES 2009



Total inspections: 23,116

Figure 3: TYPE OF SHIP INSPECTED 2009

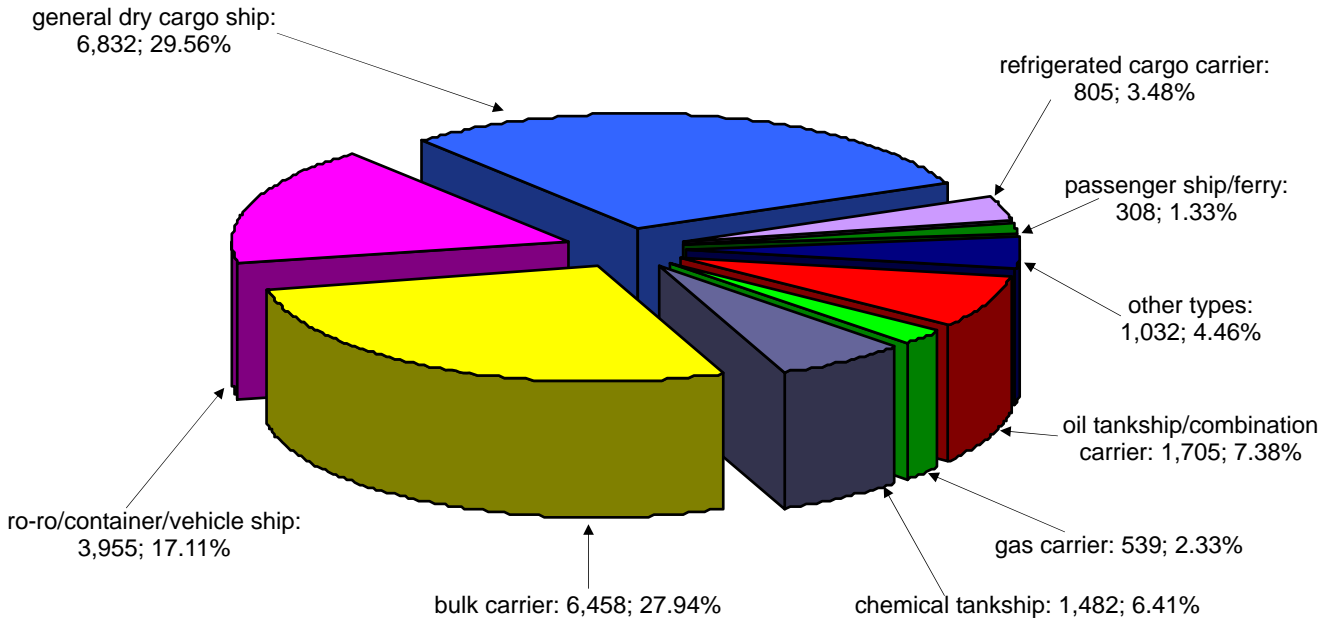
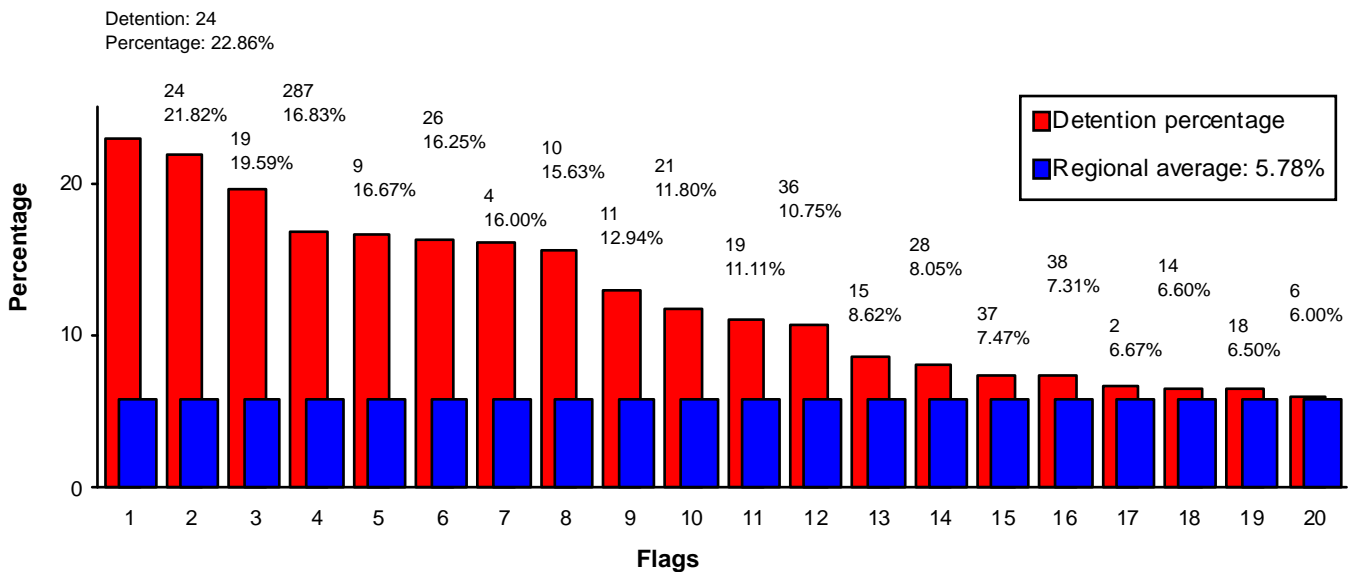


Figure 4: DETENTIONS PER FLAG 2009



Flags:

- | | | | |
|-----------------|------------------------------|--------------------------------------|----------------------|
| 1. Sierra Leone | 2. Korea, Dem. People's Rep. | 3. Georgia | 4. Cambodia |
| 5. Turkey | 6. Mongolia | 7. Netherlands Antilles | 8. St. Kitts & Nevis |
| 9. India | 10. Indonesia | 11. Kiribati | 12. Thailand |
| 13. Tuvalu | 14. Belize | 15. Viet Nam | 16. Malta |
| 17. Dominica | 18. Malaysia | 19. Saint Vincent and the Grenadines | 20. Italy |

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 2009

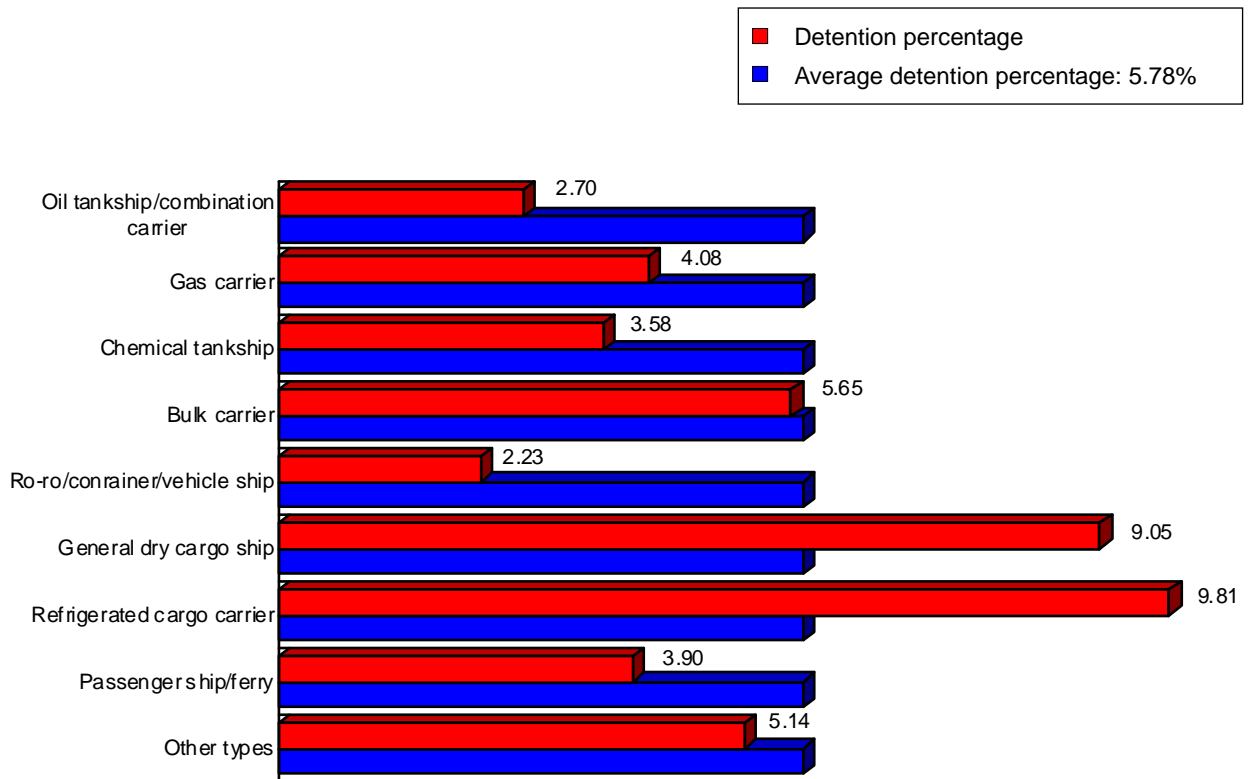


Figure 6: DEFICIENCIES BY MAIN CATEGORIES 2009

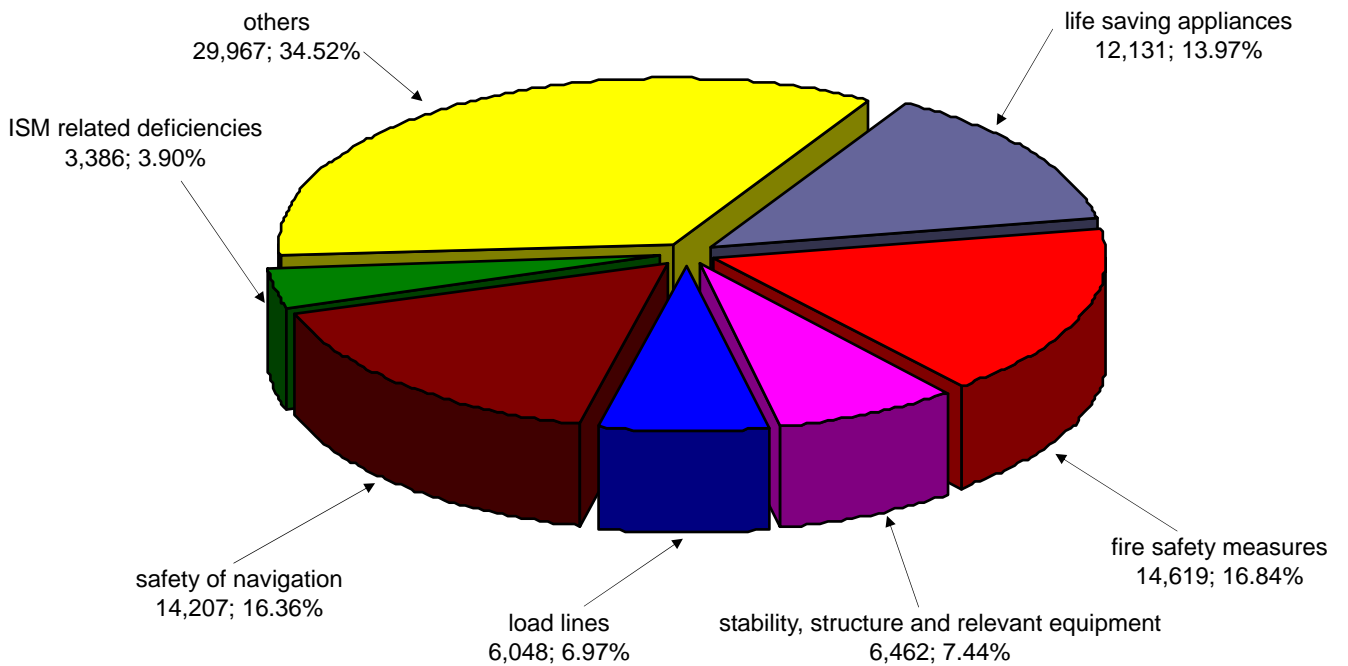
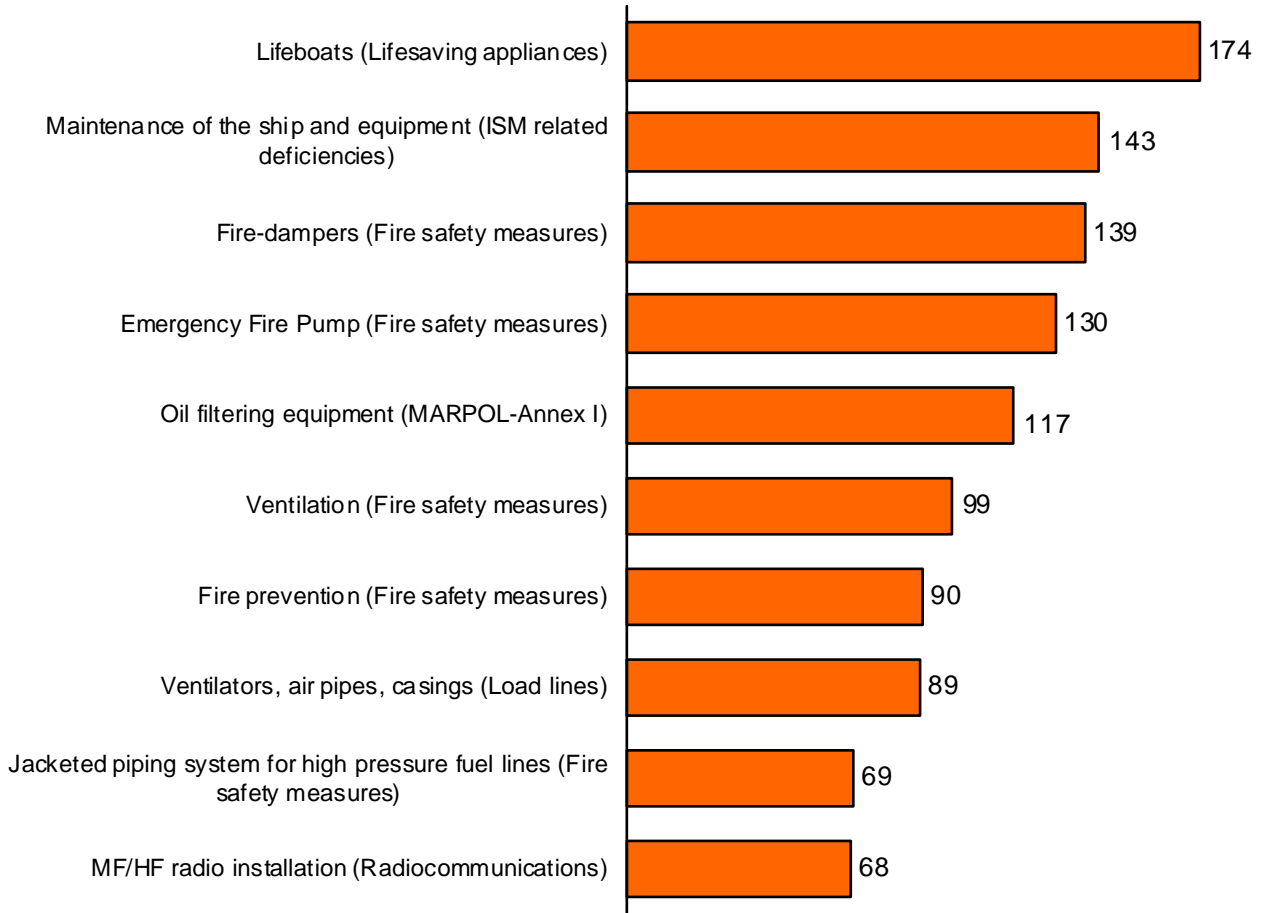


Figure 7: MOST FREQUENT DETAINABLE DEFICIENCIES 2009



OVERVIEW OF PORT STATE CONTROL RESULTS 1999 - 2009

Figure 8: NO. OF INSPECTIONS

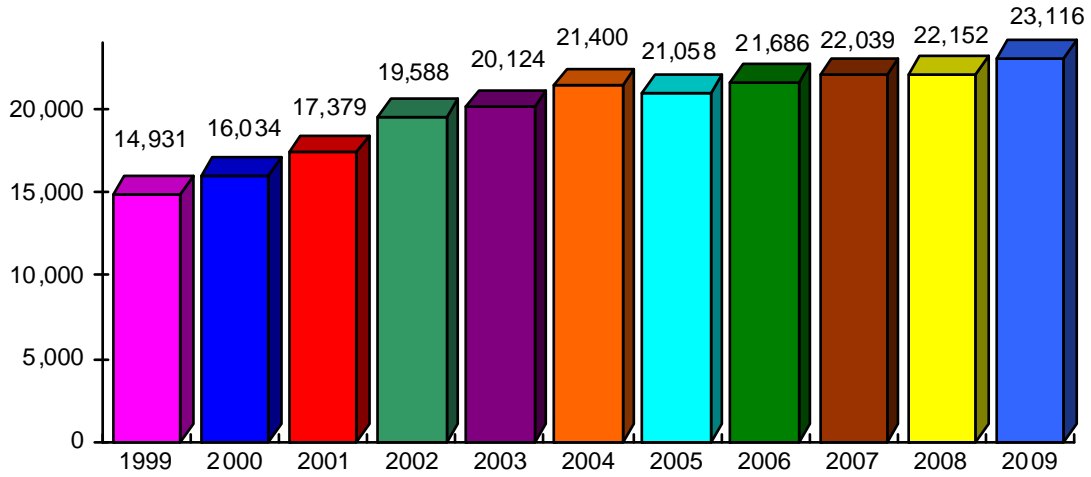


Figure 9: INSPECTION PERCENTAGE

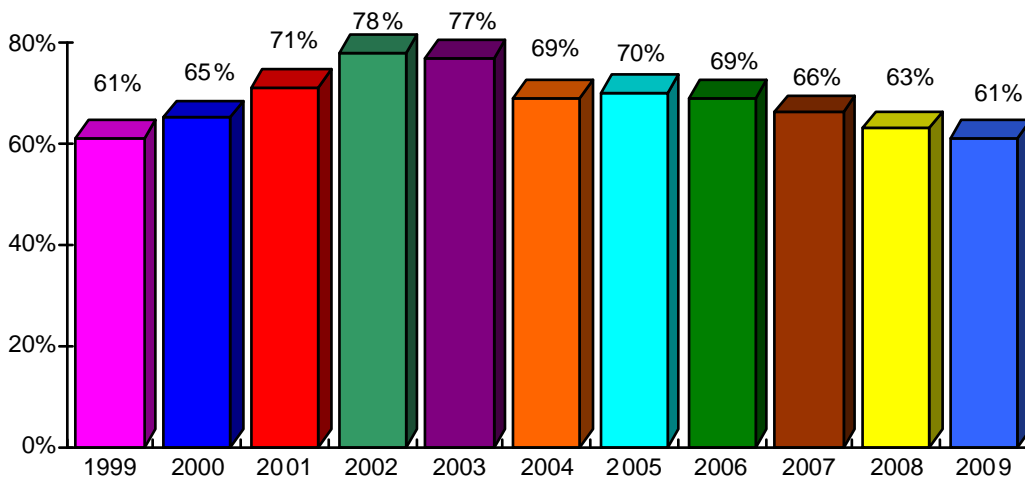


Figure 10: NO. OF INSPECTIONS WITH DEFICIENCIES

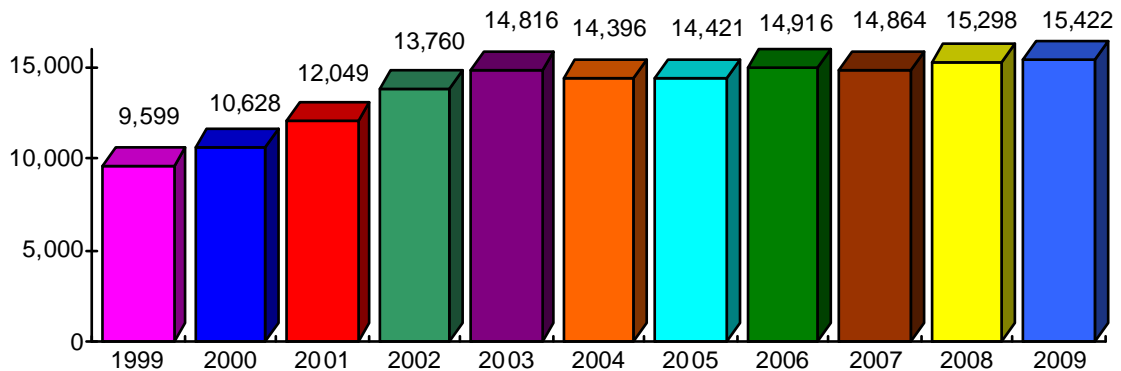


Figure 11: NO. OF DEFICIENCIES

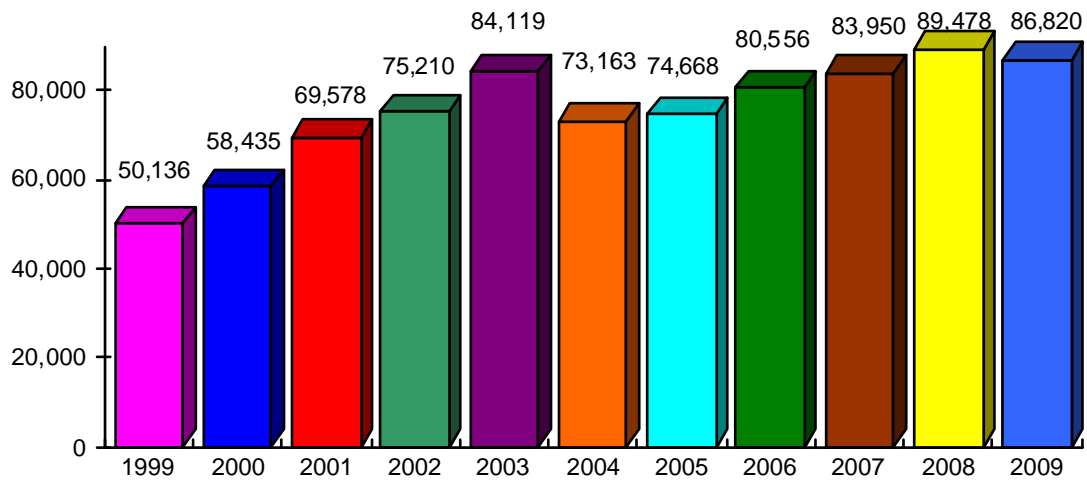


Figure 12: NO. OF DETENTIONS

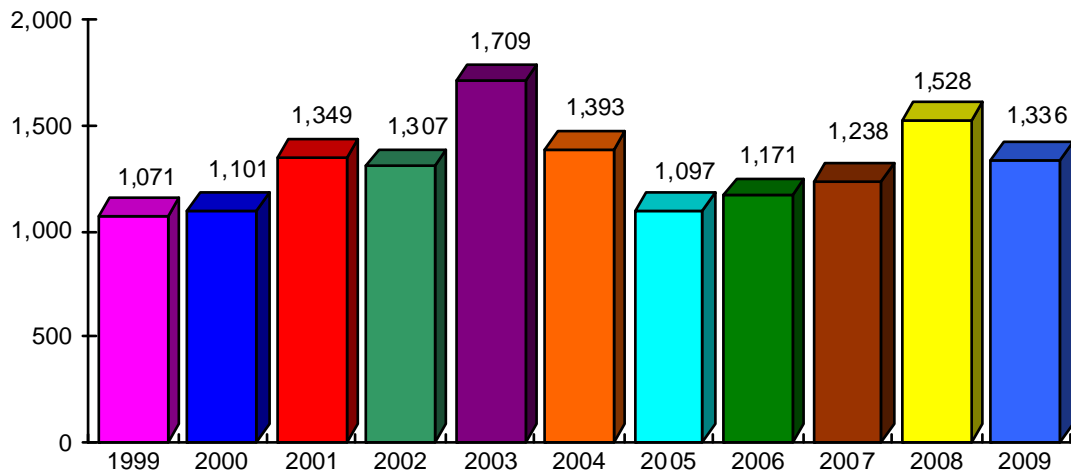
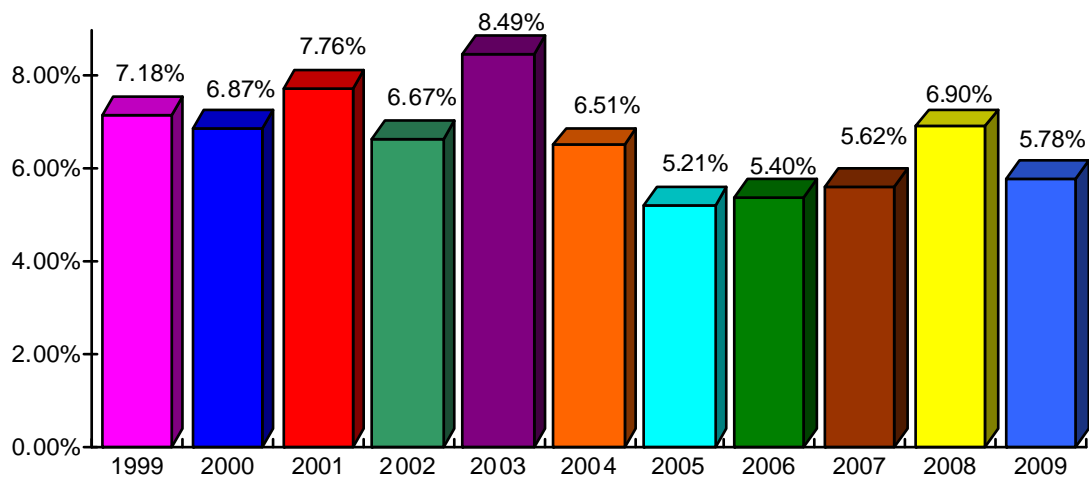


Figure 13: DETENTION PERCENTAGE



ANNEX 1

STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(As at 31 December 2009)

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	-	08/05/78	-	-	16/11/92	06/11/87	-	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	-	07/01/80	-
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	-	19/10/83	19/10/83	-	31/01/97	31/01/92	-	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	-
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	-	20/12/99	20/12/99	24/06/05	20/12/99	18/07/05	-	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 2009)

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	-	-	-
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	-	-	31/01/97	-
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	-	-	-	-
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 2009

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⁾	2,605	4,041	2,994	1,047	1,835	9,052	248	4,237	61.48	8.28
Canada ⁴⁾	390	402	402	0	213	690	6	1,518	25.69	1.49
Chile	654	934	732	202	340	907	13	1,627	40.20	1.78
China	3,599	5,676	4,308	1,368	3,757	28,257	404	12,458	28.89	9.38
Fiji	4	5	4	1	0	0	0	148	2.70	0
Hong Kong, China	691	712	692	20	488	1,747	30	4,758	14.52	4.34
Indonesia	972	1,128	1,065	63	218	1,050	15	5,782	16.81	1.41
Japan	3,511	5,854	4,930	924	3,328	17,289	192	7,239	48.50	3.89
Republic of Korea	1,715	2,893	2,313	580	1,949	11,458	265	8,503	20.17	11.46
Malaysia	352	421	367	54	182	770	4	5,032	7.00	1.09
New Zealand	491	851	567	284	292	1,072	21	723	67.91	3.70
Papua New Guinea	99	156	106	50	50	430	7	263	37.64	6.60
Philippines	1,233	1,766	1,504	262	445	1,768	2	2,063	59.77	0.13
Russian Federation ⁴⁾	774	2,095	1,162	933	902	5,964	51	1,131	68.44	4.39
Singapore	536	1,076	666	410	468	1,892	14	11,583	4.63	2.10
Thailand	364	443	405	38	248	522	8	2,857	12.74	1.98
Vanuatu	0	0	0	0	0	0	0	37	0	0
Viet Nam	750	1,120	899	221	707	3,952	56	2,498	30.02	6.23
Total	13,298	29,573	23,116	6,457	15,422	86,820	1,336	Regional 21,827	Regional 61%	Regional 5.78%

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

2) LMIU data for 2009.

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

Authority	No. of inspections	No. of inspections with security related deficiencies	No. of security related deficiencies	No. of security related detentions	Detention percentage (%)
Australia	2,994	7	7	0	0
Canada	402	6	6	0	0
Chile	732	19	19	0	0
China	4,308	501	587	13	0.30
Fiji	4	0	0	0	0
Hong Kong, China	692	31	33	1	0.14
Indonesia	1,065	17	19	0	0
Japan	4,930	461	538	2	0.04
Republic of Korea	2,313	329	405	17	0.73
Malaysia	367	32	32	0	0
New Zealand	567	8	11	0	0
Papua New Guinea	106	3	3	0	0
Philippines	1,504	22	25	0	0
Russian Federation	1,162	76	85	0	0
Singapore	666	185	189	0	0
Thailand	405	4	4	1	0.25
Vanuatu	0	0	0	0	0
Vietnam	899	48	48	0	0
Total	23,116	1,749	2,011	34	Regional 0.15%

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	3	31	1	33.33
Antigua and Barbuda	379	235	970	11	2.90
Argentina	6	5	16	0	0
Australia	12	5	27	0	0
Bahamas	588	309	1,288	22	3.74
Bahrain	4	3	10	0	0
Bangladesh	10	10	59	1	10.00
Barbados	19	16	47	0	0
Belgium	21	10	32	0	0
Belize	348	322	2,079	28	8.05
Bermuda (UK)	68	27	140	2	2.94
Bolivia	2	0	0	0	0
Brazil	1	1	14	1	100.00
Brunei Darussalam	3	2	3	0	0
Bulgaria	5	1	1	0	0
Cambodia	1,705	1,662	13,501	287	16.83
Canada	2	0	0	0	0
Cayman Islands (UK)	77	38	142	2	2.60
Chile	2	1	6	0	0
China	693	415	1,890	8	1.15
Colombia	1	1	7	0	0
Comoros	5	5	21	0	0
Cook Islands	12	10	56	0	0
Croatia	25	15	63	1	4.00
Cyprus	474	291	1,471	27	5.70
Denmark	111	54	223	3	2.70
Dominica	30	25	175	2	6.67
Ecuador	1	1	1	0	0
Egypt	13	8	51	0	0
Ethiopia	5	5	19	1	20.00
Falkland Islands (UK)	1	1	11	0	0
France	34	23	65	0	0
Georgia	97	96	817	19	19.59
Germany	212	120	426	3	1.42
Gibraltar (UK)	39	20	162	2	5.13
Greece	248	122	494	7	2.82
Honduras	3	3	21	0	0
Hong Kong, China	1,516	860	3,844	25	1.65
India	85	56	400	11	12.94

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Indonesia	178	163	1,115	21	11.80
Iran	12	11	65	0	0
Ireland	1	1	1	0	0
Isle of Man (UK)	105	53	206	4	3.81
Israel	5	5	31	0	0
Italy	100	60	208	6	6.00
Jamaica	2	2	7	0	0
Japan	122	74	381	3	2.46
Kiribati	171	155	1,189	19	11.11
Korea, Democratic People's Republic	110	105	1,073	24	21.82
Korea, Republic of	1,125	865	4,488	14	1.24
Kuwait	13	8	49	0	0
Liberia	1,290	713	2,955	43	3.33
Libyan Arab Jamahiriya	2	0	0	0	0
Lithuania	4	2	11	0	0
Luxemburg	11	6	22	0	0
Malaysia	212	134	804	14	6.60
Maldives	14	13	72	0	0
Malta	520	340	1,767	38	7.31
Marshall Islands	721	383	1,863	31	4.30
Mauritius	1	1	4	0	0
Mexico	2	2	13	1	50.00
Moldova	3	3	39	2	66.67
Mongolia	160	151	1,221	26	16.25
Myanmar	8	8	36	0	0
Netherlands	111	58	189	1	0.90
Netherlands Antilles	25	17	72	4	16.00
New Zealand	2	0	0	0	0
Norway	185	98	344	6	3.24
Pakistan	7	6	27	1	14.29
Palau	1	1	4	0	0
Panama	7,333	4,734	25,987	385	5.25
Papua New Guinea	17	17	131	5	29.41
Philippines	212	145	810	8	3.77
Portugal	3	1	2	0	0
Qatar	6	2	10	0	0
Russian Federation	291	254	1,301	16	5.50
Saint Vincent and the Grenadines	277	242	1,575	18	6.50
Samoa	1	1	8	0	0
Saudi Arabia	12	9	45	0	0

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Seychelles	1	0	0	0	0
Sierra Leone	105	101	857	24	22.86
Singapore	1,200	565	2,648	35	2.92
Slovakia	8	8	94	2	25.00
Spain	1	0	0	0	0
Sri Lanka	3	2	15	0	0
St. Kitts & Nevis	64	60	458	10	15.63
Sweden	21	6	15	0	0
Switzerland	28	16	70	1	3.57
Taiwan, China	68	49	248	3	4.41
Tanzania	1	1	14	0	0
Thailand	335	252	1,609	36	10.75
Togo	6	6	55	1	16.67
Tonga	15	13	61	1	6.67
Tunisia	2	0	0	0	0
Turkey	54	37	265	9	16.67
Tuvalu	174	150	973	15	8.62
Ukraine	4	3	11	0	0
United Arab Emirates (UAE)	3	2	9	0	0
United Kingdom (UK)	176	88	302	5	2.84
United States of America	25	21	70	0	0
Vanuatu	92	46	205	3	3.26
Viet Nam	495	372	2,133	37	7.47
Total	23,116	15,422	86,820	1,336	Regional 5.78

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	73	39	220	4	5.48
Combination carrier	74	35	290	2	2.70
Oil tanker	1,558	698	3,472	40	2.57
Gas carrier	539	261	1,195	22	4.08
Chemical tanker	1,482	842	4,052	53	3.58
Bulk carrier	6,458	4,141	22,410	365	5.65
Vehicle carrier	587	251	878	16	2.73
Container ship	3,174	1,805	7,231	67	2.11
Ro-Ro cargo ship	194	131	617	5	2.58
General cargo/multi-purpose ship	6,832	5,698	38,145	618	9.05
Refrigerated cargo carrier	805	643	3,686	79	9.81
Woodchip carrier	212	99	276	5	2.36
Livestock carrier	55	33	173	1	1.82
Ro-Ro passenger ship	77	64	512	4	5.19
Passenger ship	231	125	566	8	3.46
Factory ship	1	0	0	0	0
Heavy load carrier	67	38	158	2	2.99
Offshore service vessel	126	87	484	2	1.59
MODU & FPSO	5	5	26	0	0
High speed passenger craft	58	55	184	0	0
Special purpose ship	47	32	147	0	0
High speed cargo craft	1	1	8	0	0
Tugboat	217	160	971	25	11.52
Others	243	179	1,119	18	7.41
Total	23,116	15,422	86,820	1,336	5.78

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	7	0	0	0	0	0
American Bureau of Shipping	2,012	65	4	3.23	0.20	6.15
Belize Maritime Bureau Inc.	81	6	0	7.41	0	0
Biro Klasifikasi Indonesia	75	15	3	20.00	4.00	20.00
Bulgarski Koraben Registar	2	1	0	50.00	0	0
Bureau Securitas	5	0	0	0	0	0
Bureau Veritas	2,014	111	5	5.51	0.25	4.50
Ceskoslovensky Lodin Register	3	2	0	66.67	0	0
China Classification Society	2,079	43	1	2.07	0.05	2.33
China Corporation Register of Shipping	349	31	1	8.88	0.29	3.23
Compania Nacional de Registro e Inspeccion de Naves	1	0	0	0	0	0
Croatian Register of Shipping	32	3	1	9.38	3.13	33.33
Cyprus Bureau of Shipping	3	0	0	0	0	0
Det Norske Veritas	2,529	91	6	3.60	0.24	6.59
Fidenavis SA	19	1	0	5.26	0	0
Germanischer Lloyd	2,035	56	1	2.75	0.05	1.79
Global Marine Bureau	875	141	19	16.11	2.17	13.48
Hellenic Register of Shipping	16	1	0	6.25	0	0
Honduras International Surveying and Inspection Bureau	1	0	0	0	0	0
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	198	28	4	14.14	2.02	14.29
Indian Register of Shipping	91	10	1	10.99	1.10	10.00
Intermaritime Certification Services, S.A.	246	31	2	12.60	0.81	6.45
International Naval Surveys Bureau	62	5	1	8.06	1.61	20.00
International Register of Shipping	382	68	12	17.80	3.14	17.65
International Ship Classification	398	42	11	10.55	2.76	26.19
Isthmus Bureau of Shipping	498	55	11	11.04	2.21	20.00
Korea Classification Society (former Joson Classification Society)	109	25	9	22.94	8.26	36.00
Korea Ship Safety Technology Authority	41	0	0	0	0	0
Korean Register of Shipping	2,057	64	3	3.11	0.15	4.69
Lloyd's Register	2,801	120	9	4.28	0.32	7.50
Marconi International Marine Company Ltd.	2	0	0	0	0	0
Maritime Technical Systems and Services	60	9	3	15.00	5.00	33.33

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 Cargo Bureau Inc.	1	0	0	0	0	0
National Shipping Adjusters Inc	9	1	0	11.11	0	0
Nippon Kaiji Kyokai	7,413	282	30	3.80	0.40	10.64
NV Unitas	3	1	0	33.33	0	0
Overseas Marine Certification Services	144	33	4	22.92	2.78	12.12
Panama Bureau of Shipping	74	6	2	8.11	2.70	33.33
Panama Maritime Documentation Services	132	23	3	17.42	2.27	13.04
Panama Maritime Surveyors Bureau Inc	203	28	2	13.79	0.99	7.14
Panama Register Corporation	70	10	0	14.29	0	0
Panama Shipping Certificate Inc.	2	0	0	0	0	0
Panama Shipping Registrar Inc.	172	20	1	11.63	0.58	5.00
Polski Rejestr Statkow	35	2	0	5.71	0	0
Registro Internacional Naval S.A.	9	2	0	22.22	0	0
Registro Italiano Navale	382	27	0	7.07	0	0
RINAVE Portuguesa	5	1	0	20.00	0	0
Russian Maritime Register of Shipping	532	47	2	8.83	0.38	4.26
Russian River Register	2	0	0	0	0	0
Shipping Register of Ukraine	2	1	0	50.00	0	0
Sociedad Clasificadora de Colombia	1	0	0	0	0	0
Turkish Lloyd	11	4	0	36.36	0	0
Union Bureau of Shipping	897	155	42	17.28	4.68	27.10
Universal Maritime Bureau	339	53	13	15.63	3.83	24.53
Universal Shipping Bureau	116	12	0	10.34	0	0
Viet Nam Register of Shipping	559	53	8	9.48	1.43	15.09
Other	333	54	8	16.22	2.40	14.81

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	2,399
Stability, structure and related equipment	6,462
Propulsion and auxiliary machinery	5,723
Alarm signals	533
Fire safety measures	14,619
Oil, chemical tankers and gas carriers	258
Lifesaving appliances	12,131
Radiocommunications	3,354
Safety of navigation	14,207
Carriage of cargo and dangerous goods	496
ISM related deficiencies	3,386
SOLAS related operational deficiencies	4,132
Additional measures to enhance maritime safety	822
Bulk carriers-additional safety measures	379
Load lines	6,048
MARPOL-Annex I	4,452
MARPOL-Annex II	64
MARPOL-Annex III	12
MARPOL-Annex IV	727
MARPOL-Annex V	1,341
MARPOL-Annex VI	312
MARPOL related operational deficiencies	440
AFS Convention	21
Certification and watchkeeping for seafarers	1,398
Crew and accommodation (ILO 147)	305
Food and catering (ILO 147)	151
Working spaces (ILO 147)	866
Accident prevention (ILO 147)	712
Mooring arrangements (ILO 147)	863
Other deficiencies	207
Total	86,820
Maritime security related deficiencies	2,011
Grand total	88,831

SUMMARY OF PORT STATE INSPECTION DATA 2007 – 2009

Table 7: BLACK – GREY – WHITE LISTS *

Flag	Inspections 2007-2009	Detentions 2007-2009	Black to Grey Limit	Grey to White Limit	Excess Factor
BLACK LIST					
Sierra Leone	240	71	24		6.93
Georgia	303	82	29		6.31
Korea, Democratic People's Republic	334	73	32		4.74
Cambodia	5,170	880	393		4.06
Mongolia	596	106	52		3.76
St. Kitts & Nevis	132	27	15		3.66
Indonesia	616	101	54		3.34
Kiribati	315	54	30		3.26
Tuvalu	587	93	52		3.15
Papua New Guinea	48	8	7		1.63
Belize	1,414	135	115		1.44
Thailand	917	89	77		1.39
Viet Nam	1,320	123	108		1.35
GREY LIST					
Maldives	43	6	6	0	0.96
Turkey	131	13	14	4	0.86
Saint Vincent and the Grenadines	868	69	74	48	0.82
Dominica	110	10	13	3	0.73
Netherlands Antilles	79	7	10	1	0.67
India	264	21	26	11	0.67
Taiwan, China	227	16	23	9	0.51
Tonga	44	3	6	0	0.49
Pakistan	31	2	5	0	0.47
Israel	37	2	6	0	0.40
Malta	1,363	91	111	79	0.36
Malaysia	594	38	52	31	0.33
Barbados	46	2	7	0	0.32
Croatia	65	3	8	1	0.30
Cook Islands	31	1	5	0	0.29
Belgium	67	3	9	1	0.29
Egypt	32	1	5	0	0.28
Iran	84	4	10	2	0.28
Gibraltar (UK)	97	4	11	2	0.20
Italy	286	15	28	12	0.17
Myanmar	66	2	9	1	0.16
Switzerland	55	1	7	0	0.11

Flag	Inspections 2007-2009	Detentions 2007-2009	Black to Grey Limit	Grey to White Limit	Excess Factor
WHITE LIST					
Kuwait	34	0		0	0
Isle of Man (UK)	316	11		14	-0.41
Panama	21,419	1,171		1,437	-0.42
Russian Federation	997	44		56	-0.45
Cyprus	1,388	60		81	-0.55
Antigua and Barbuda	1,077	43		61	-0.62
Marshall Islands	1,785	73		107	-0.68
Sweden	71	0		1	-0.71
Cayman Islands (UK)	223	5		9	-0.73
Philippines	604	19		31	-0.79
Vanuatu	238	5		10	-0.83
United States of America	116	1		3	-0.86
Netherlands	374	9		18	-0.92
Bermuda (UK)	157	2		5	-0.93
Greece	678	17		36	-1.08
Bahamas	1,742	52		104	-1.08
Liberia	3,775	121		238	-1.09
Norway	631	15		33	-1.11
Japan	345	6		16	-1.18
Denmark	323	5		15	-1.24
Singapore	3,169	85		198	-1.27
France	107	0		3	-1.28
United Kingdom (UK)	502	8		25	-1.38
Germany	585	7		30	-1.59
Korea, Republic of	3,312	54		207	-1.66
Hong Kong, China	4,139	67		262	-1.68
China	2,186	25		133	-1.81

- 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 %
	2007	2008	2009	Total	2007	2008	2009	Total	
Afghanistan	0	1	0	1	0	0	0	0	0
Algeria	0	2	3	5	0	0	1	1	20.00
Antigua and Barbuda	331	367	379	1,077	9	23	11	43	3.99
Argentina	2	3	6	11	0	2	0	2	18.18
Australia	8	4	12	24	0	0	0	0	0
Austria	3	0	0	3	0	0	0	0	0
Bahamas	621	533	588	1,742	14	16	22	52	2.99
Bahrain	2	2	4	8	0	0	0	0	0
Bangladesh	2	8	10	20	0	1	1	2	10.00
Barbados	12	15	19	46	1	1	0	2	4.35
Belgium	24	22	21	67	2	1	0	3	4.48
Belize	618	448	348	1,414	58	49	28	135	9.55
Bermuda (UK)	42	47	68	157	0	0	2	2	1.27
Bolivia	4	3	2	9	1	1	0	2	22.22
Brazil	6	2	1	9	0	1	1	2	22.22
Brunei Darussalam	3	3	3	9	0	0	0	0	0
Bulgaria	2	2	5	9	0	0	0	0	0
Cambodia	1,710	1,755	1,705	5,170	269	324	287	880	17.02
Canada	0	2	2	4	0	1	0	1	25.00
Cayman Islands (UK)	65	81	77	223	3	0	2	5	2.24
Chile	1	1	2	4	0	0	0	0	0
China	798	695	693	2,186	7	10	8	25	1.14
Colombia	1	0	1	2	0	0	0	0	0
Comoros	9	6	5	20	0	1	0	1	5.00
Cook Islands	11	8	12	31	0	1	0	1	3.23
Croatia	22	18	25	65	1	1	1	3	4.62
Cyprus	477	437	474	1,388	15	18	27	60	4.32
Denmark	104	108	111	323	0	2	3	5	1.55
Dominica	41	39	30	110	7	1	2	10	9.09
Ecuador	0	5	1	6	0	0	0	0	0
Egypt	10	9	13	32	1	0	0	1	3.13
Equatorial Guinea	0	1	0	1	0	1	0	1	100.00
Ethiopia	7	4	5	16	0	1	1	2	12.50
Falkland Islands (UK)	0	0	1	1	0	0	0	0	0
Fiji	1	1	0	2	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2007	2008	2009	Total	2007	2008	2009	Total	
Finland	2	0	0	2	0	0	0	0	0
France	38	35	34	107	0	0	0	0	0
Gambia	0	1	0	1	0	0	0	0	0
Georgia	96	110	97	303	30	33	19	82	27.06
Germany	201	172	212	585	2	2	3	7	1.20
Gibraltar (UK)	30	28	39	97	2	0	2	4	4.12
Greece	216	214	248	678	5	5	7	17	2.51
Honduras	12	2	3	17	7	0	0	7	41.18
Hong Kong, China	1,302	1,321	1,516	4,139	16	26	25	67	1.62
India	95	84	85	264	2	8	11	21	7.95
Indonesia	229	209	178	616	40	40	21	101	16.40
Iran	37	35	12	84	1	3	0	4	4.76
Ireland	0	0	1	1	0	0	0	0	0
Isle of Man (UK)	108	103	105	316	1	6	4	11	3.48
Israel	21	11	5	37	1	1	0	2	5.41
Italy	86	100	100	286	6	3	6	15	5.24
Jamaica	2	6	2	10	0	0	0	0	0
Japan	111	112	122	345	2	1	3	6	1.74
Jordan	1	2	0	3	0	1	0	1	33.33
Kiribati	34	110	171	315	15	20	19	54	17.14
Korea, Democratic People's Republic	131	93	110	334	29	20	24	73	21.86
Korea, Republic of	1,063	1,124	1,125	3,312	17	23	14	54	1.63
Kuwait	9	12	13	34	0	0	0	0	0
Lebanon	1	1	0	2	0	0	0	0	0
Liberia	1,257	1,228	1,290	3,775	28	50	43	121	3.21
Libyan Arab Jamahiriya	0	0	2	2	0	0	0	0	0
Lithuania	1	1	4	6	0	1	0	1	16.67
Luxemburg	6	9	11	26	0	0	0	0	0
Malaysia	195	187	212	594	11	13	14	38	6.40
Maldives	6	23	14	43	0	6	0	6	13.95
Malta	422	421	520	1,363	21	32	38	91	6.68
Marshall Islands	507	557	721	1,785	11	31	31	73	4.09
Mauritania	0	1	0	1	0	0	0	0	0
Mauritius	0	0	1	1	0	0	0	0	0
Mexico	1	0	2	3	0	0	1	1	33.33
Moldova	0	0	3	3	0	0	2	2	66.67

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2007	2008	2009	Total	2007	2008	2009	Total	
Mongolia	226	210	160	596	50	30	26	106	17.79
Morocco	1	0	0	1	0	0	0	0	0
Myanmar	34	24	8	66	2	0	0	2	3.03
Netherlands	134	129	111	374	5	3	1	9	2.41
Netherlands Antilles	31	23	25	79	1	2	4	7	8.86
New Zealand	5	2	2	9	0	1	0	1	11.11
Norway	234	212	185	631	3	6	6	15	2.38
Pakistan	12	12	7	31	0	1	1	2	6.45
Palau	0	0	1	1	0	0	0	0	0
Panama	6,930	7,156	7,333	21,419	328	458	385	1,171	5.47
Papua New Guinea	15	16	17	48	1	2	5	8	16.67
Philippines	195	197	212	604	6	5	8	19	3.15
Poland	0	1	0	1	0	0	0	0	0
Portugal	2	2	3	7	0	1	0	1	14.29
Qatar	6	4	6	16	0	0	0	0	0
Russian Federation	371	335	291	997	17	11	16	44	4.41
Saint Vincent and the Grenadines	303	288	277	868	20	31	18	69	7.95
Samoa	2	2	1	5	1	0	0	1	20.00
Saudi Arabia	6	8	12	26	0	1	0	1	3.85
Seychelles	3	4	1	8	1	0	0	1	12.50
Sierra Leone	52	83	105	240	22	25	24	71	29.58
Singapore	931	1,038	1,200	3,169	22	28	35	85	2.68
Slovakia	8	3	8	19	2	1	2	5	26.32
Solomon Islands	0	2	0	2	0	1	0	1	50.00
South Africa	2	2	0	4	0	0	0	0	0
Spain	2	3	1	6	0	0	0	0	0
Sri Lanka	0	3	3	6	0	0	0	0	0
St. Kitts & Nevis	15	53	64	132	4	13	10	27	20.45
Sweden	25	25	21	71	0	0	0	0	0
Switzerland	16	11	28	55	0	0	1	1	1.82
Syrian Arab Republic	0	1	0	1	0	0	0	0	0
Taiwan, China	81	78	68	227	6	7	3	16	7.05
Tanzania	1	2	1	4	0	0	0	0	0
Thailand	307	275	335	917	27	26	36	89	9.71
Togo	0	1	6	7	0	0	1	1	14.29
Tonga	15	14	15	44	1	1	1	3	6.82

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2007	2008	2009	Total	2007	2008	2009	Total	
Trinidad and Tobago	1	0	0	1	0	0	0	0	0
Tunisia	0	2	2	4	0	0	0	0	0
Turkey	35	42	54	131	1	3	9	13	9.92
Tuvalu	221	192	174	587	49	29	15	93	15.84
Ukraine	9	2	4	15	2	1	0	3	20.00
United Arab Emirates (UAE)	4	6	3	13	0	0	0	0	0
United Kingdom (UK)	183	143	176	502	2	1	5	8	1.59
United States of America	46	45	25	116	0	1	0	1	0.86
Vanuatu	64	82	92	238	2	0	3	5	2.10
Viet Nam	350	475	495	1,320	28	58	37	123	9.32
Ship's registration withdrawn	4	0	0	4	0	0	0	0	0
Total	22,039	22,152	23,116	67,307	1,238	1,528	1,336	4,102	6.09

Figure 14: COMPARISON OF INSPECTIONS PER SHIP TYPE

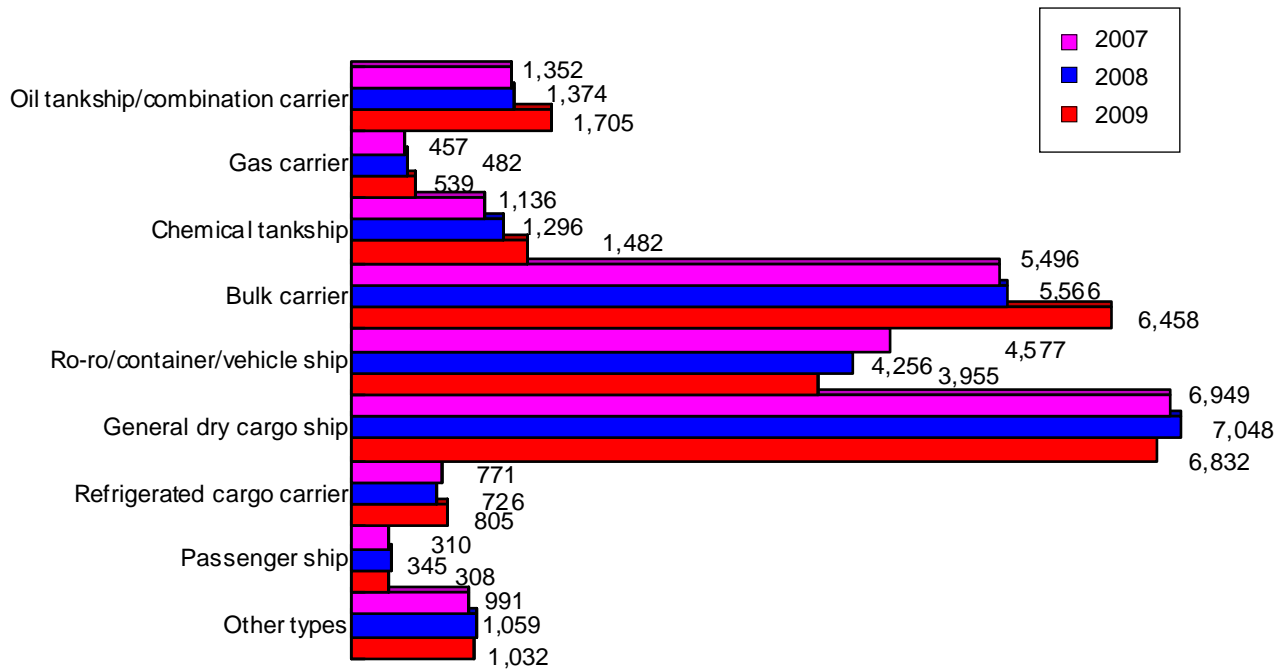


Figure 15: COMPARISON OF DETENTIONS PER SHIP TYPE

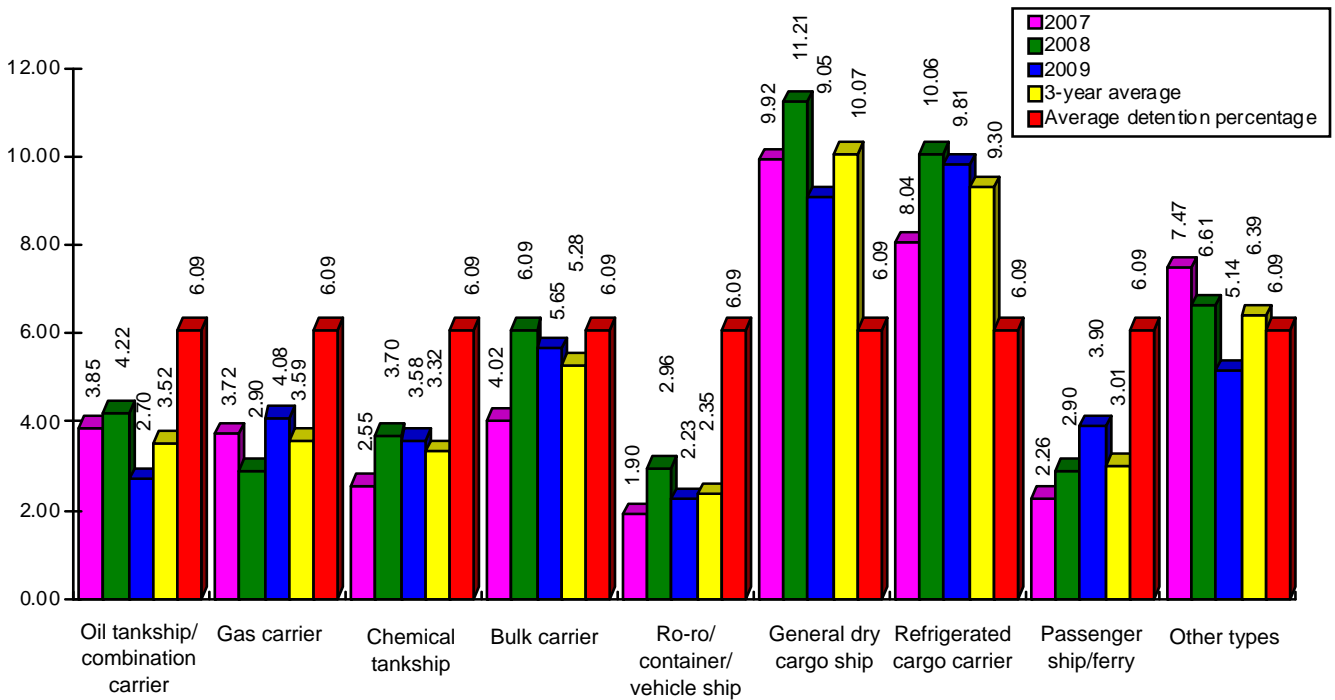
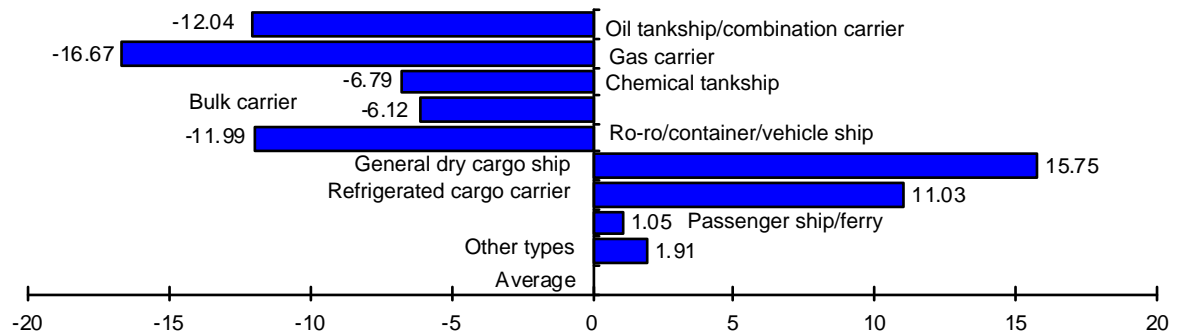


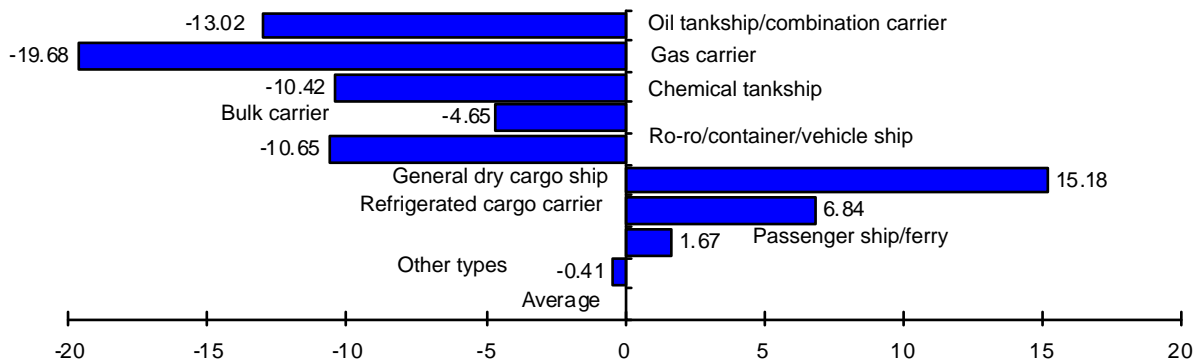
Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2007	2008	2009	Total	2007	2008	2009	Total	
NLS tanker	60	54	73	187	1	4	4	9	4.81
Combination carrier	44	63	74	181	1	1	2	4	2.21
Oil tanker	1,248	1,257	1,558	4,063	50	53	40	143	3.52
Gas carrier	457	482	539	1,478	17	14	22	53	3.59
Chemical tanker	1,136	1,296	1,482	3,914	29	48	53	130	3.32
Bulk carrier	5,496	5,566	6,458	17,520	221	339	365	925	5.28
Vehicle carrier	729	752	587	2,068	17	20	16	53	2.56
Container ship	3,582	3,246	3,174	10,002	58	90	67	215	2.15
Ro-Ro cargo ship	266	258	194	718	12	16	5	33	4.60
General cargo/multi-purpose ship	6,949	7,048	6,832	20,829	689	790	618	2,097	10.07
Refrigerated cargo carrier	771	726	805	2,302	62	73	79	214	9.30
Woodchip carrier	217	230	212	659	3	4	5	12	1.82
Livestock carrier	41	43	55	139	4	2	1	7	5.04
Ro-Ro Passenger ship	76	96	77	249	1	7	4	12	4.82
Passenger ship	234	249	231	714	6	3	8	17	2.38
Factory ship	1	1	1	3	0	0	0	0	0
Heavy load carrier	52	48	67	167	3	2	2	7	4.19
Offshore service vessel	94	129	126	349	4	7	2	13	3.72
MODU & FPSO	7	6	5	18	0	0	0	0	0
High speed passenger craft	46	52	58	156	0	0	0	0	0
Special purpose ship	62	59	47	168	5	1	0	6	3.57
High speed cargo craft	2	1	1	4	1	0	0	1	25.00
Tugboat	225	239	217	681	40	35	25	100	14.68
Others	244	251	243	738	14	19	18	51	6.91
Total	22,039	22,152	23,116	67,307	1,238	1,528	1,336	4,102	6.09

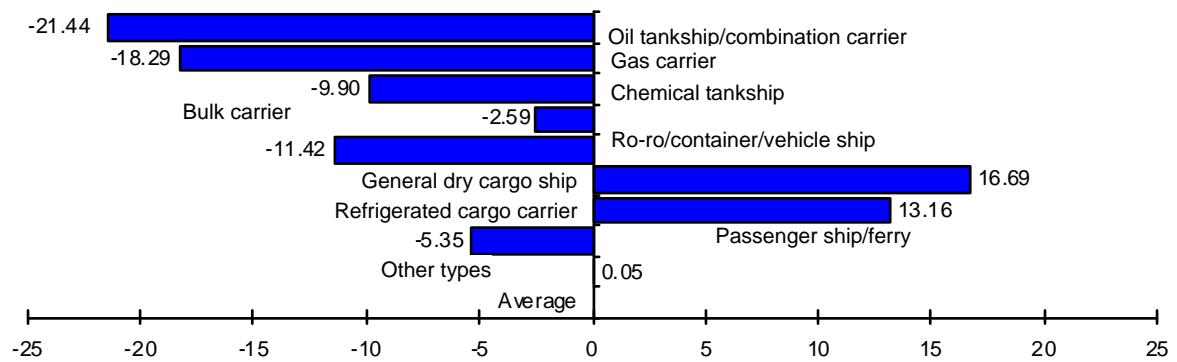
Figure 16: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE



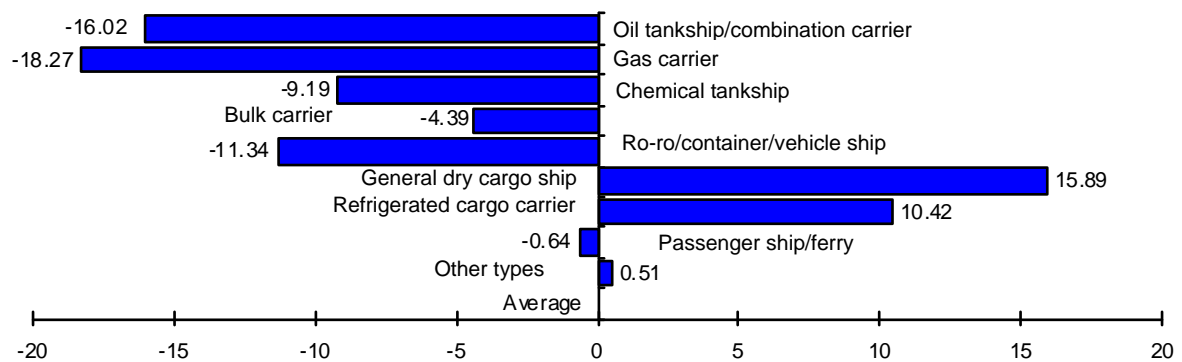
(a) Year 2007



(b) Year 2008



(c) Year 2009



(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 %
	2007	2008	2009	Total	2007	2008	2009	Total	
Oil tankship/combination carrier	1,352	1,374	1,705	4,431	749	770	772	2,291	51.70
Gas carrier	457	482	539	1,478	232	238	261	731	49.46
Chemical tankship	1,136	1,296	1,482	3,914	689	760	842	2,291	58.53
Bulk carrier	5,496	5,566	6,458	17,520	3,370	3,585	4,141	11,096	63.33
Ro-ro/container/vehicle ship	4,577	4,256	3,955	12,788	2,538	2,486	2,187	7,211	56.39
General dry cargo ship	6,949	7,048	6,832	20,829	5,781	5,937	5,698	17,416	83.61
Refrigerated cargo carrier	771	726	805	2,302	605	551	643	1,799	78.15
Passenger ship	310	345	308	963	213	244	189	646	67.08
Other types	991	1,059	1,032	3,082	687	727	689	2,103	68.23
Total	22,039	22,152	23,116	67,307	14,864	15,298	15,422	45,584	67.73

Table 11: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2007-2009	No. of overall detentions 2007-2009	No. of RO responsible detentions 2007-2009	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Alfa Register of Shipping	16	0	0	0	0	0
American Bureau of Shipping	5,429	173	13	3.19	0.24	7.51
Belize Maritime Bureau Inc.	462	40	5	8.66	1.08	12.50
Belize Register Corporation	5	0	0	0	0	0
Biro Klasifikasi Indonesia	292	69	11	23.63	3.77	15.94
Bulgarski Koraben Registar	2	1	0	50.00	0	0
Bureau Securitas	9	0	0	0	0	0
Bureau Veritas	5,395	285	17	5.28	0.32	5.96
Ceskoslovensky Lodin Register	6	2	0	33.33	0	0
China Classification Society	6,232	115	6	1.85	0.10	5.22
China Corporation Register of Shipping	1,094	108	16	9.87	1.46	14.81
Compania Nacional de Registro e Inspeccion de Naves	7	5	2	71.43	28.57	40.00
Croatian Register of Shipping	80	6	1	7.50	1.25	16.67
Cyprus Bureau of Shipping	7	0	0	0	0	0
Det Norske Veritas	7,140	241	27	3.38	0.38	11.20
Fidenavis SA	60	2	0	3.33	0	0
Germanischer Lloyd	5,954	190	10	3.19	0.17	5.26
Global Marine Bureau	3,073	524	78	17.05	2.54	14.89
Hellenic Register of Shipping	92	14	1	15.22	1.09	7.14
Honduras Bureau of Shipping	6	1	0	16.67	0	0
Honduras International Surveying and Inspection Bureau	7	2	1	28.57	14.29	50.00
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	699	112	23	16.02	3.29	20.54
Indian Register of Shipping	277	21	2	7.58	0.72	9.52
Intermaritime Certification Services, S.A.	424	62	7	14.62	1.65	11.29
International Naval Surveys Bureau	133	15	1	11.28	0.75	6.67
International Register of Shipping	1,004	173	31	17.23	3.09	17.92
International Ship Classification	1,217	204	48	16.76	3.94	23.53
Isthmus Bureau of Shipping	1,640	206	32	12.56	1.95	15.53
Korea Classification Society (former Joson Classification Society)	347	72	24	20.75	6.92	33.33
Korea Ship Safety Technology Authority	95	4	1	4.21	1.05	25.00
Korean Register of Shipping	5,916	199	9	3.36	0.15	4.52
Lloyd's Register	7,757	318	23	4.10	0.30	7.23
Marconi International Marine Company Ltd.	3	0	0	0	0	0
Maritime Technical Systems and Services	234	39	10	16.67	4.27	25.64
National Cargo Bureau Inc.	3	0	0	0	0	0
National Shipping Adjusters Inc	13	2	1	15.38	7.69	50.00
Nippon Kaiji Kyokai	21,104	753	70	3.57	0.33	9.30
NV Unitas	5	1	0	20.00	0	0
Overseas Marine Certification Services	328	69	7	21.04	2.13	10.14
Panama Bureau of Shipping	201	11	3	5.47	1.49	27.27
Panama Maritime Documentation Services	494	64	6	12.96	1.21	9.38
Panama Maritime Surveyors Bureau Inc	550	97	6	17.64	1.09	6.19
Panama Register Corporation	277	30	2	10.83	0.72	6.67

Recognized organization (RO)	No. of overall inspections 2007-2009	No. of overall detentions 2007-2009	No. of RO responsible detentions 2007-2009	3-year average detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Panama Shipping Certificate Inc.	10	0	0	0	0	0
Panama Shipping Registrar Inc.	488	87	11	17.83	2.25	12.64
Polski Rejestr Statkow	102	8	1	7.84	0.98	12.50
Register of Shipping (Albania)	1	0	0	0	0	0
Registro Cubano de Buques	1	0	0	0	0	0
Registro Internacional Naval S.A.	34	2	0	5.88	0	0
Registro Italiano Navale	926	72	2	7.78	0.22	2.78
RINAVE Portuguesa	12	1	0	8.33	0	0
Russian Maritime Register of Shipping	1,850	131	4	7.08	0.22	3.05
Russian River Register	6	0	0	0	0	0
Shipping Register of Ukraine	3	1	0	33.33	0	0
Sociedad Clasificadora de Colombia	1	0	0	0	0	0
Societe Generale de Surveillance	1	0	0	0	0	0
Turkish Lloyd	26	7	1	26.92	3.85	14.29
Union Bureau of Shipping	2,227	432	98	19.40	4.40	22.69
Universal Maritime Bureau	855	121	27	14.15	3.16	22.31
Universal Shipping Bureau	197	24	0	12.18	0	0
Viet Nam Register of Shipping	1,439	157	24	10.91	1.67	15.29
Other	1,304	208	36	15.95	2.76	17.31

See also the note in page 29.

Table 12: PERFORMANCE OF RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2007-2009	No. of RO responsible detentions 2007-2009	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Korea Classification Society (former Joson Classification Society)	347	24	12	2	3.87	Very low
Union Bureau of Shipping	2,227	98	56	33	2.72	
International Ship Classification	1,217	48	33	16	2.09	
Maritime Technical Systems and Services	234	10	9	1	1.42	Low
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	699	23	21	7	1.29	
International Register of Shipping	1,004	31	28	12	1.27	
Universal Maritime Bureau	855	27	24	10	1.27	
Biro Klasifikasi Indonesia	292	11	10	1	1.19	
Global Marine Bureau	3,073	78	75	48	1.10	
Panama Shipping Registrar Inc.	488	11	15	4	0.61	
Overseas Marine Certification Services	328	7	11	2	0.55	
Isthmus Bureau of Shipping	1,640	32	43	23	0.46	
Croatian Register of Shipping	80	1	4	0	0.38	
Panama Bureau of Shipping	201	3	8	0	0.36	
Intermaritime Certification Services, S.A.	424	7	14	3	0.36	
Hellenic Register of Shipping	92	1	5	0	0.34	
Korea Ship Safety Technology Authority	95	1	5	0	0.34	
Polski Rejestr Statkow	102	1	5	0	0.32	
Viet Nam Register of Shipping	1,439	24	38	20	0.24	
International Naval Surveys Bureau	133	1	6	0	0.24	
Panama Maritime Documentation Services	494	6	15	4	0.15	
China Corporation Register of Shipping	1,094	16	30	14	0.14	
Belize Maritime Bureau Inc.	462	5	15	4	0.11	
Indian Register of Shipping	277	2	10	1	0.09	
Panama Register Corporation	277	2	10	1	0.09	
Panama Maritime Surveyors Bureau Inc	550	6	17	5	0.08	
Universal Shipping Bureau	197	0	8	0	-0.20	High
Registro Italiano Navale	926	2	26	11	-1.42	
Det Norske Veritas	7,140	27	163	123	-1.52	

Recognized organization (RO)	No. of overall inspections 2007-2009	No. of RO responsible detentions 2007-2009	Low/medium Limit	Medium/high Limit	Excess factor	Performance level
Bureau Veritas	5,395	17	125	90	-1.58	
Russian Maritime Register of Shipping	1,850	4	47	27	-1.61	
Nippon Kaiji Kyokai	21,104	70	456	388	-1.62	
Lloyd's Register	7,757	23	176	134	-1.63	
American Bureau of Shipping	5,429	13	126	91	-1.68	
Germanischer Lloyd	5,954	10	137	101	-1.78	
Korean Register of Shipping	5,916	9	137	100	-1.80	
China Classification Society	6,232	6	143	106	-1.87	

- 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

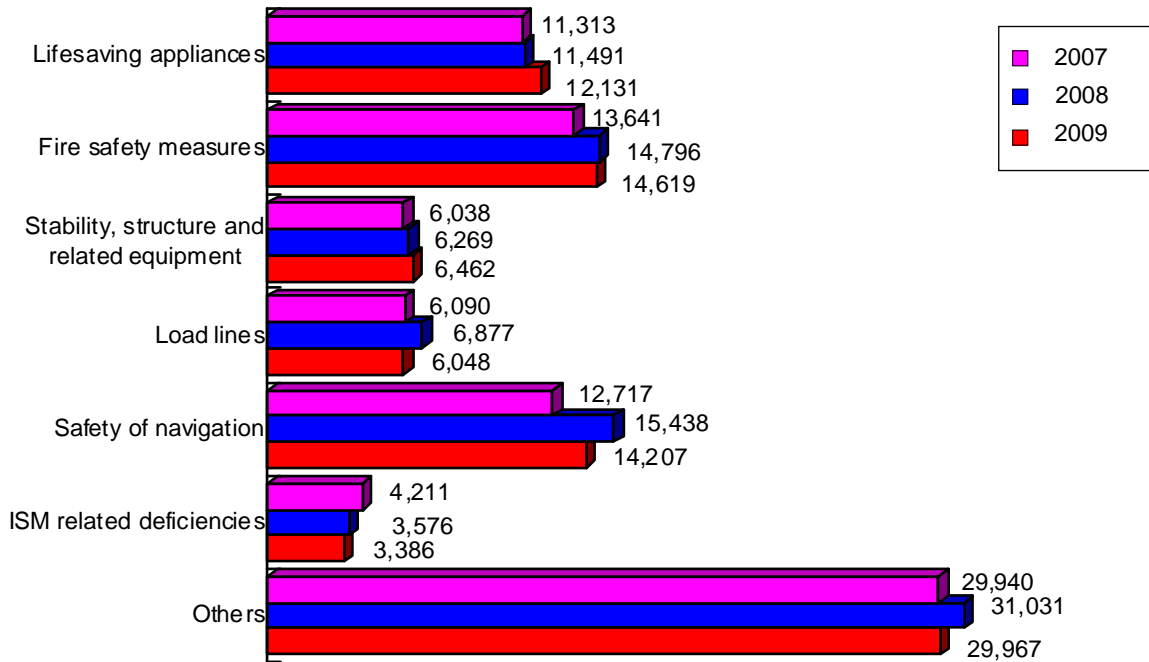


Table 13: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency	Number of deficiencies		
	2007	2008	2009
Ship's certificates and documents	2,892	2,611	2,399
Stability, structure and related equipment	6,038	6,269	6,462
Propulsion and auxiliary machinery	4,428	5,185	5,723
Alarm signals	418	490	533
Fire safety measures	13,641	14,796	14,619
Oil, chemical tankers and gas carriers	264	213	258
Lifesaving appliances	11,313	11,491	12,131
Radiocommunications	3,213	3,527	3,354
Safety of navigation	12,717	15,438	14,207
Carriage of cargo and dangerous goods	575	537	496
ISM related deficiencies	4,211	3,576	3,386
SOLAS related operational deficiencies	3,805	4,076	4,132
Additional measures to enhance maritime safety	969	874	822
Bulk carriers-additional safety measures	311	310	379
Load lines	6,090	6,877	6,048
MARPOL-Annex I	5,657	5,505	4,452
MARPOL-Annex II	98	77	64
MARPOL-Annex III	21	26	12
MARPOL-Annex IV	118	340	727
MARPOL-Annex V	1,825	1,687	1,341
MARPOL-Annex VI	373	358	312
MARPOL related operational deficiencies	442	440	440
AFS Convention	-	31	21
Certification and watchkeeping for seafarers	2,175	1,817	1,398
Crew and accommodation (ILO 147)	319	414	305
Food and catering (ILO 147)	137	167	151
Working spaces (ILO 147)	581	756	866
Accident prevention (ILO 147)	586	746	712
Mooring arrangements (ILO 147)	653	747	863
Other deficiencies	80	97	207
Total	83,950	89,478	86,820
Maritime security related deficiencies	1,532	2,318	2,011
Grand total	85,482	91,796	88,831

Figure 18: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

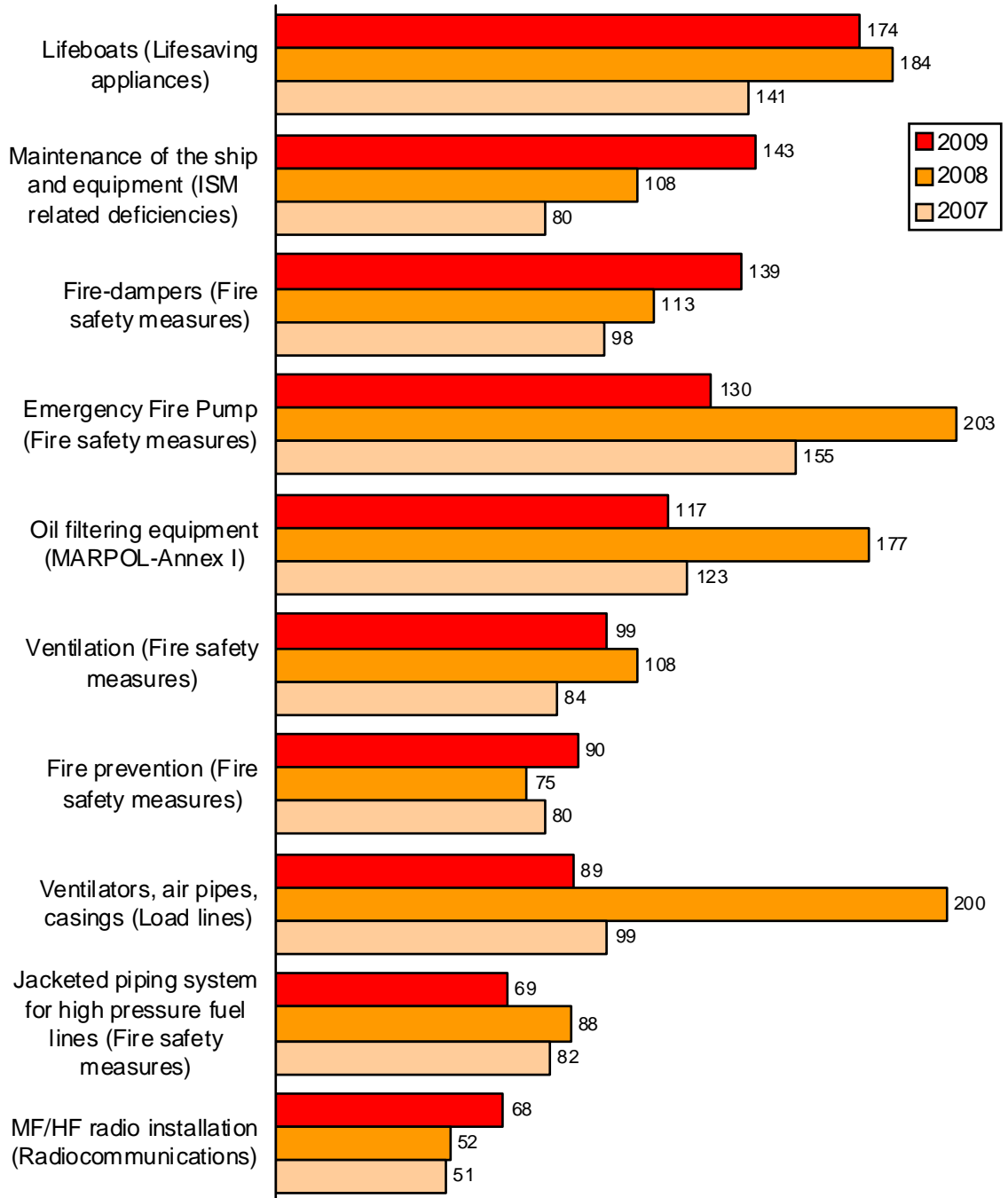
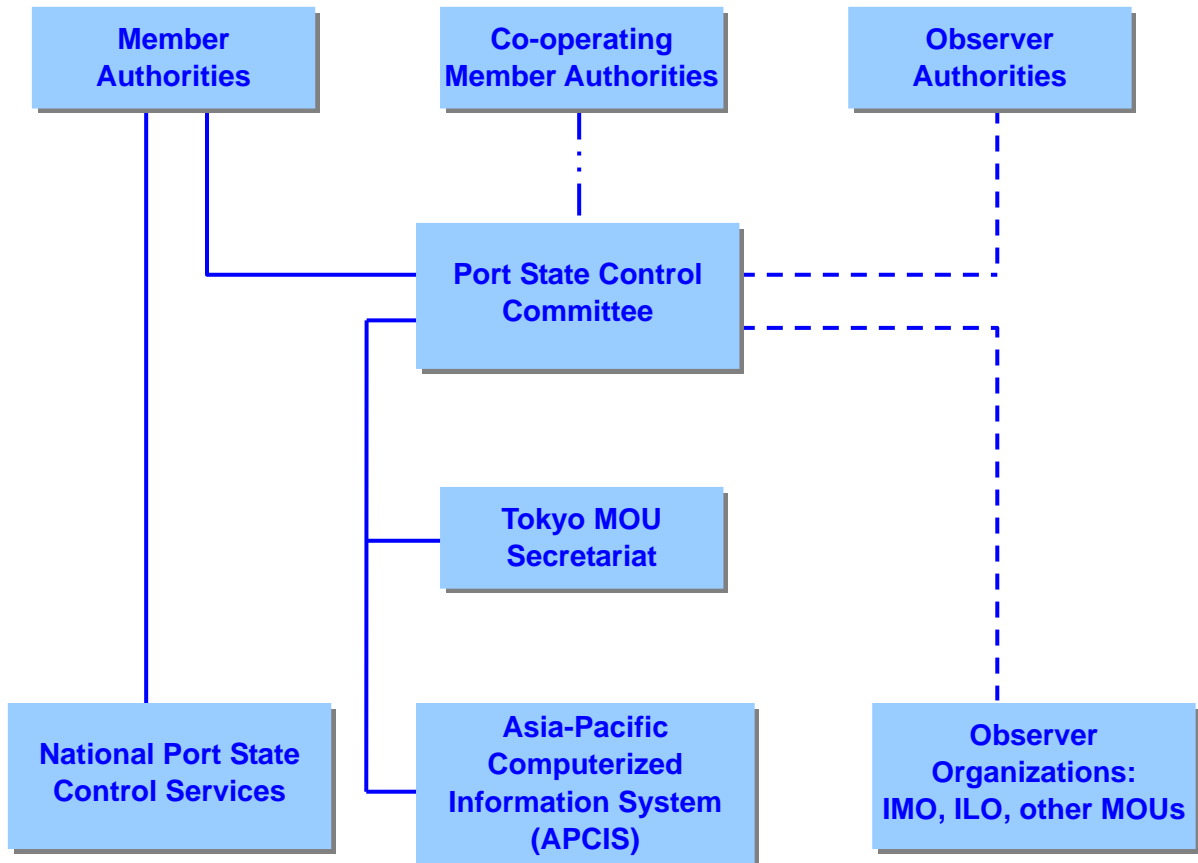


Table 14: COMPARISON OF MOST FREQUENT DETAINABLE DEFICIENCIES

No.	Most frequent deficiencies	Year		
		2007	2008	2009
1	Lifeboats (Lifesaving appliances)	141	184	174
2	Maintenance of the ship and equipment (ISM related deficiencies)	80	108	143
3	Fire-dampers (Fire safety measures)	98	113	139
4	Emergency Fire Pump (Fire safety measures)	155	203	130
5	Oil filtering equipment (MARPOL-Annex I)	123	177	117
6	Ventilation (Fire safety measures)	84	108	99
7	Fire prevention (Fire safety measures)	80	75	90
8	Ventilators, air pipes, casings (Load lines)	99	200	89
9	Jacketed piping system for high pressure fuel lines (Fire safety measures)	82	88	69
10	MF/HF radio installation (Radiocommunications)	51	52	68

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:

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

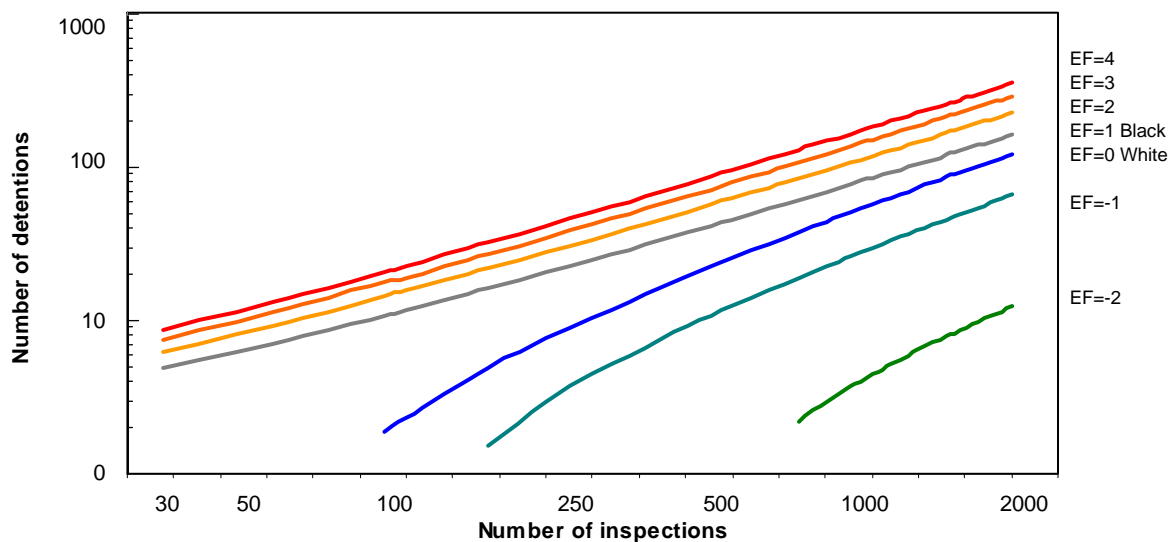
$$U_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

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 240 inspections of which 71 resulted in a detention. The "black to grey limit" is 24 detentions. The excess factor is 6.93.

N = total inspections

P = 7%

Q = 3%

Z = 1.645

How to determine the black to grey limit:

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

$$u_{black-to-grey} = 240 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{240 \cdot 0.07 \cdot 0.93}$$

$$u = 24$$

The excess factor is 6.93. 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 5.93, and the outcome has to be added to the normal value for 'p':

$$p + 5.93q = 0.07 + (5.93 \cdot 0.03) = 0.2479$$

$$u_{excessfactor} = 240 \cdot 0.2479 + 0.5 + 1.645 \cdot \sqrt{240 \cdot 0.2479 \cdot 0.7521}$$

$$u_{excessfactor} = 71$$

Example flag on Grey list:

Ships of Turkey were subject to 131 inspections, of which 13 resulted in a detention. The "black to grey limit" is 14 and the "grey to white limit" is 4. The excess factor is 0.86.

How to determine the black to grey limit:

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

$$u_{black-to-grey} = 14$$

How to determine the grey to white limit:

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

$$u_{white-to-grey} = 131 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{131 \cdot 0.07 \cdot 0.93}$$

$$u_{white-to-grey} = 4$$

To determine the excess factor the following formula is used:

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

$$ef = (13 - 3.87) / (14.47 - 3.87)$$

$$ef = 0.86$$

Example flag on White list:

Ships of Singapore were subject to 3,169 inspections of which 85 resulted in detention. The "grey to white limit" is 198 detentions. The excess factor is -1.27.

How to determine the grey to white limit:

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

$$u_{\text{white-to-grey}} = 3,169 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{3,169 \cdot 0.07 \cdot 0.93}$$

$$u_{\text{white-to-grey}} = 198$$

The excess factor is -1.27. 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 -1.27, and the outcome has to be added to the normal value for 'p':

$$p + (-1.27q) = 0.07 + (-1.27 \cdot 0.03) = 0.0319$$

$$u_{\text{excessfactor}} = 3,169 \cdot 0.0319 - 0.5 - 1.645 \cdot \sqrt{3,169 \cdot 0.0319 \cdot 0.9681}$$

$$u_{\text{excessfactor}} = 85$$

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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