

**ANNUAL REPORT**

**ON**

**PORT STATE CONTROL**

**IN THE ASIA-PACIFIC REGION**

**2003**



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## FOREWORD

We are pleased to present the **Annual Report on Port State Control in the Asia-Pacific Region 2003**.

A decade ago, the maritime Authorities in the Asia-Pacific region gathered in Tokyo, Japan, and concluded the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU). Since then, significant progress and development on port State control activities in the region has been achieved. The Tokyo MOU now consists of eighteen member Authorities which carried out more than 20,000 inspections during 2003, and exceeded the regional inspection rate of 75%. The Tokyo MOU has been recognized as one of the leading regional port State control regimes in the world.

The 2003 annual report includes a general overview of the developments and activities of port State control in the Asia-Pacific region during the year. In addition, the report also provides a series of statistics and analysis on the results of port State inspections conducted by member Authorities in 2003.

Recognizing that there are still certain flag States, recognized organizations, and shipowners persistently failing to fulfill their obligations under the international maritime conventions, port State control will remain an effective defense against unsafe and substandard ships. In this regard, Tokyo MOU will continue to take all measures possible to further enhance and improve port State control activities in the region, so as to promote maritime safety and protection of the marine environment, and to achieve the long-term objective of the elimination of operation of substandard ships.

J.N.K Mansell  
Chairman  
Port State Control Committee

Yoshio Sasamura  
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 ninth issue and covers port State control activities and developments in the year 2003.

The Memorandum was concluded in Tokyo on 1 December 1993 and has been signed by the following 18 maritime Authorities in the Asia-Pacific region: Australia, Canada, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, Philippines, 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, Philippines, 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: Brunei Darussalam, Macao (China), Solomon Islands, United States Coast Guard, the International Maritime Organization (IMO), the International Labour Organization (ILO), the Economic and Social Commission for Asia and the Pacific (ESCAP), the Paris MOU, Acuerdo de Viña del Mar Agreement and the Indian Ocean 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;
- 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;
- 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; and
- the Merchant Shipping (Minimum Standards) Convention, 1976 (ILO Convention No. 147).

industry and the general public at large. During year 2003, several further initiatives and development had been made by the Tokyo MOU.

For the purpose of providing more transparent, comprehensive and timely information on port State control inspections conducted by member Authorities, Tokyo MOU started to publish PSC data on the web-site on internet from 1 January 2003 on a real time basis. The PSC database interface provides the multi-option search machine through which visitors could pick up PSC data for a specific ship or check list of inspections by port Authority, flag, classification society, ship type and result or type of inspection easily. Publication of PSC data would enhance publicity of the MOU and promote development and improvement of port State control activities in the region.

As a useful tool and decision supporting system for PSC officers when selecting ship for inspection, an automatic calculated ship targeting system was adopted and implemented in the database system by the Tokyo MOU on an experimental basis. The ship targeting factors are calculated every day, based on ship age, ship type, flag, classification society and inspection histories. Ships with higher values of targeting factors would be given higher priority for inspection. Currently, the ship targeting system is implemented on a trial basis. Upon experiences gained and more analysis obtained, the ship targeting system will be improved and implemented on a permanent basis.

## REVIEW OF YEAR 2003

Port State control activities under the Tokyo MOU has attracted more and more attention and gained wide recognition from the shipping

In 2003, Tokyo MOU took up structural safety of bulk carriers for the concentrated inspection campaign (CIC) of the year. The three-month

inspection campaign ran from 1 September to 30 November 2003 and targeted bulk carriers, as defined in SOLAS74 IX/1.6, of above 15,000 GT and more than 12 years old, particularly those carrying high density or corrosive cargoes and trading on the “spot market”. During the campaign period, member Authorities inspected a total of 396 bulk carriers and 13 of them were detained because of serious structural deficiencies found. The detention rate during the campaign is about 3.3%.

### THE PORT STATE CONTROL COMMITTEE

Members of the Port State Control Committee met in Reñaca, Chile, on 24 - 27 March 2003 for its twelfth meeting. The meeting was hosted by the Directorate General of Maritime Territory and Merchant Marine of Chile. Mr. John Mansell, Divisional Manager, Maritime Operations, Maritime Safety Authority of New Zealand, chaired the meeting.

This twelfth meeting was attended by



The twelfth Committee meeting, Reñaca, March 2003

representatives of the member Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Russian Federation, Singapore, Vanuatu and Vietnam, and observers from the United States Coast Guard, the International Maritime Organization and the Secretariats of the Paris MOU and Viña del Mar Agreement.

The Port State Control Committee considered the applications for observer status by the Authority of Macao (China) and the Secretariat of Viña del Mar Agreement. In accordance with the provisions of the Memorandum, the Committee unanimously agreed to grant observer status to Macao (China) and Viña del Mar Agreement.

The Committee considered and decided to introduce a black-grey-white list, which had been adopted and used by the Paris MOU a few years ago, so as to improve assessment and provide better indication of performance of flags.

The Committee made evaluation of results of the concentrated inspection campaign on the ISM Code compliance conducted during July - September 2002. The Committee considered and approved arrangements for the concentrated inspection campaign on bulk carrier safety in 2003. The Committee discussed and agreed with the proposal on carrying out a concentrated inspection campaign on control of operational requirements in autumn 2004.



The Committee reviewed the trial implementation of the ship targeting system. Based on a preliminary analysis, the Committee considered and adopted a revised ship targeting system and further decided to continue the trial for a longer period for accumulating sufficient experience and for further possible improvement.

For the purpose of taking unified approach on implementation of STCW 95 requirements in the region, the Committee considered and adopted the guidelines for port State control on STCW 95 requirements. The Committee considered the matter of development of procedures on control of operational requirements and instructed an inter-sessional working group to continue to work on development of the procedures.

The Committee considered the progress made regarding introduction of new format of the Port State Control Manual. The Committee agreed in principle to revised the Port State Control Manual according to the new format and entrusted an inter-sessional working group to complete the draft new Manual for trial use by PSC officers and to collect feedbacks and comments for improvement and finalization of the Manual.

Furthermore, the Committee also deliberated and took decisions on the following matters:

- review of the list of follow-up actions stemming from the Joint Ministerial Declaration;
- amendments to the Memorandum;
- review of membership criteria and status; and

- revision of financial contribution formula.

The thirteenth meeting of the Committee will be held in Vanuatu in February 2004.

### PREPARATION OF THE SECOND JOINT MINISTERIAL CONFERENCE

Five years ago, the First Joint Ministerial Conference on Port State Control of the Paris and Tokyo Memoranda was held in Canada. In response to the Declaration adopted by the Ministerial Conference, the Port State Control Committees of the Tokyo and Paris MOUs had taken series of measures and actions to enhance PSC activities in and co-operation between the two regions.

By the initiative of the Minister of Transport of Canada, a Second Joint Ministerial Conference of the Paris and Tokyo Memoranda on port State Control had been decided to be held in autumn 2004 in Vancouver, Canada. The official invitations had been sent to the Ministers in charge of Port State Control of the Authorities of the two MOUs by the host.

For preparation of the conference, preparatory meetings had been organized, in conjunction with the Committee meetings of the two MOUs and IMO meetings during year 2003, to review progress made since last conference, to identify issues to be addressed by the Ministers and to prepare draft text of the Ministerial Declaration.

Some further preparatory meetings and high official meetings had been scheduled for next year, prior to the Conference.

**ASIA-PACIFIC COMPUTERIZED INFORMATION SYSTEM (APCIS)**

For reporting and storing port State inspection results and facilitating exchange of information in the region, a computerized database system, the Asia-Pacific Computerized Information System (APCIS), has been established. The computer center of the APCIS is located in Vladivostok, under the auspices of the Maritime Department, Ministry of Transport of the Russian Federation.

The eleventh meeting of the Regional Database Managers (DBM) was held on 21 - 22 March 2003 in Reñaca, Chile, immediately before the twelfth meeting of the Committee. The meeting was chaired by Dr. Vitali Kliuev, Manager, Asia-Pacific Maritime Information and Advisory Services.

The DBM meeting considered issues relating to connection to and operation of the APCIS system generally. Furthermore, the meeting discussed batch protocol related matters. For the purpose of improvement of batch protocol data transmission, the meeting made recommendation to the Committee to establish a small inter-sessional group for making further study of the matters and preparing proposals thereon.

The meeting considered the proposed format of detailed PSC statistics to be produced by the APCIS. The meeting discussed the coding system and the matter of harmonization of codes among MOU regions.

Moreover, the meeting re-checked the contents of the APCIS Basic Document and made recommendation to the Committee for approval.

**TRAINING AND SEMINARS FOR PORT STATE CONTROL OFFICERS**

The effective and successful implementation of comprehensive technical co-operation programmes has given the Tokyo MOU advantage and good position to develop and enhance port State control activities in the Asia-Pacific region. In 2003, several further technical co-operation activities had been organized successfully for on-going implementation of the technical co-operation programmes.

The second regional training course on port State control, in conjunction with the thirteenth Tokyo MOU basic training course, was organized jointly by IMO and the Tokyo MOU Secretariats in 2003. The course was conducted from 11 to 28 November 2003 at



Training course for PSC officers



On-the-job training

the Overseas Shipbuilding Cooperation Centre (OSCC) in Yokohama, Japan. A total of 18 officers from 18 maritime Authorities in the Asia-Pacific region, 10 of them were nominated from the Tokyo MOU members and 8 were invited by IMO, attended the training course.

During the three-week training period, trainees learnt basic knowledge and skill on port State control from series lectures. Experts from OSCC, Hong Kong Marine Department, Ministry of Maritime Affairs and Fisheries of the Republic of Korea, Nippon Kaiji Kyokai, Ministry of Land, Infrastructure and Transport of Japan and the

Secretariat provided lectures and presentations on port State control provisions, convention requirements and port State control inspection procedures. Supplement to classroom lectures, two on-board inspection exercises and a technical visit to a life raft service station were also arranged for trainees to gain practical experiences and knowledge.

On 22 - 24 October 2003, the tenth seminar for port State control officers was held in Ho Chi Minh City, Viet Nam. The Vietnam National Maritime Bureau hosted the seminar. Port State control officers from the Authorities of Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Macao (China), Malaysia, Papua New Guinea, Philippines, Russian Federation, Solomon Islands, United States Coast Guard, Vanuatu and Viet Nam and a representative from the Indian Ocean MOU attended the seminar.

At the seminar, participants were informed of the recent developments in IMO on regulations relating to maritime safety,



On-the-job training



The tenth seminar for PSC officers

pollution prevention, maritime security and activities and development of the Tokyo MOU. Other important subjects covered by the seminar were discussion of draft new PSC Manual, ship targeting system, port State control on operational requirements and making good use of the APCIS system. Workshop and case study sessions were also organized on new PSC Manual and operational requirements control during the seminar. In addition, participants of the

seminar learnt port State control activities in Viet Nam.

During period of 19 September - 7 October 2003, a further fellowship training course was conducted in Japan. A total of 20 PSC officers from the Authorities of Chile, China, Republic of Korea, Malaysia, Philippines, Russian Federation, Singapore, Thailand and Viet Nam participated in the course. After one-day classroom briefing, trainees were dispatched to district/local offices and obtained practical training there through

participation in the on-board inspections with local PSC officers. At the end of the course, discussion sessions were organized for trainees to share, among themselves and with local PSC officers, experiences and views on findings and gaining during the training.

In responding to the requests by the Authorities, two expert mission training courses were undertaken in Pusan (Republic of Korea) and Port Vila (Vanuatu) in 2003. The Authorities of Australia and New Zealand sent their experts for the two missions. The experts delivered lectures on the subjects requested by the Authorities and provided guidance for on-board inspections.

Currently, there are five Authorities involved in PSC officers exchange programme, namely: Australia, Canada, Hong Kong (China), Japan and New Zealand. In 2003, four PSC officers had visited another Authority among the five for the exchange missions.



Fellowship training for PSC officers

Implementation of the technical co-operation programmes has obtained the full support and co-operation from the Port State Control Committee and the Authorities of the Tokyo MOU and the generous provision of funds by the Nippon foundation.

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

From an international perspective, establishment of regional port State control co-operation regimes has been widely accepted as an effective measure to combat substandard ships on a global basis. To date, there are eight regional PSC regimes (MOUs) in operation around the world, i.e.: Paris MOU, Acuerdo de Viña del Mar Agreement, Tokyo MOU, Caribbean MOU, Mediterranean MOU, Indian Ocean MOU, the West and Central Africa MOU and the Black Sea MOU.

For the purpose of promoting inter-regional co-operation on port State control activities, Tokyo MOU obtained observer status from the Paris MOU and Caribbean MOU. In return, Tokyo MOU had granted observer status to Paris MOU and Indian Ocean MOU until the previous year. In 2003, Viña del Mar Agreement was accepted as observer to the Tokyo MOU.

Tokyo MOU has established and maintained effective and close co-operation with the Paris MOU during the past years. Representatives of the two Secretariats present at Port State Control Committee meetings of each other. In year 2003, a number of co-ordinated efforts and initiatives had been taken by the two regions, which include:

- taking co-operated approach on review and harmonization of PSC

coding systems between the two MOUs

- preparing joint submission to IMO on results and assessment of concentrated inspection campaigns (CIC) on the ISM Code compliance
- submission of combined information on enforcement of STCW95 requirements in the two regions to IMO
- harmonized questionnaire for CICs, i.e.: Tokyo MOU has taken the same questionnaire used by Paris MOU for CIC on bulk carriers in 2003 and Paris MOU would consider to use a similar questionnaire used by Tokyo MOU for CIC on GMDSS in 2005
- submission to IMO of the list of flag States targeted by Paris MOU, Tokyo MOU and the United States Coast Guard
- joint preparatory meetings for the second joint ministerial conference

Moreover, the Secretariat and the APCIS Manager had attended the IMO Workshop for Regional Port State Control Agreement Secretaries and Directors of Information Centres to exchange views and practices of various regional agreements and to harmonize procedures for port State control. Two meetings of the Workshop were held in the past and the third meeting is scheduled to take place in June 2004.

Tokyo MOU has adopted the policy to establish and promote exchange of PSC information with other regions. In line with this

policy, the inter-regional data exchange between SIRENAC (Paris MOU PSC database) and APCIS (Tokyo MOU PSC database) had been successfully launched in 2001. Through inter-regional data exchange, PSC officers of the two regions could search and view inspection details from the each other databases via internet. Following introduction of the new SIRENAC system, data exchange between the two databases will be improved upon adjustment to be made.

In later part of 2003, PSC data exchange between the APCIS and BSIS (Black Sea MOU Information System) had been implemented. Direct links are provided via on-line user interface of the two database systems.

Further, correspondence and preparation have also been undertaken for the purpose of establishment of connections between the APCIS database and the United States Coast Guard PSC database system.

In addition to co-operation on administrative levels, Tokyo MOU also maintained co-operations with Paris MOU and other MOUs on technical levels. In 2003, three PSC officers from China, Hong Kong (China) and the Russian Federation attended the thirty-sixth and thirty-seventh Paris MOU PSC seminars as representatives from the Tokyo MOU respectively. One PSC officer from China also participated in an expert training on human element organized by the Paris MOU. On the other hand, a representative from the Indian Ocean MOU was accepted to attend the tenth seminar of the Tokyo MOU in Viet Nam.

In September 2003, the Secretariat was visited by a delegation from the Abuja MOU.

During the visit, the Secretariat introduced to the Abuja MOU delegation its works and activities of the Tokyo MOU and exchanged views with them on establishment of the Secretariat and development of PSC information system.

## PORT STATE CONTROL UNDER THE TOKYO MOU, 2003

### INSPECTIONS

In 2003, 20,124 inspections were carried out on ships registered in 98 countries. The number of inspections increased 536 by number or 2.7% in percentage, compared with 19,588 inspections in 2002. Figure 2 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. During the inspections, 14,816 ships were found with deficiencies. Since the total number of individual ships operating in the region was estimated at 26,142\*, the inspection rate in the region was approximately 77% in 2003 (see Figure 1).



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 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 2003, 1,709 ships registered in 67 countries were detained because of serious deficiencies found on board. The detention rate of ships inspected was about 8.49%. Compared with 1,307 detentions in 2002, there was significant increase in detentions, 402 more or 31%

\* Sum of the numbers of individual ships which visited the ports of the region during the first and second half of the year (the figure was provided by LMIU).

higher than the figure in 2002.

Although its registration of ships came into operation just about one year, Mongolia, with undoubted inspection records, took the third place of the worst flags in 2003. Figure 4 shows the detention rate by flags where at least 20 port State inspections were involved and where detention rate was above the average regional rate. Figure 5 gives the detention rate by ship type.

Black-grey-white list (Table 7) was introduced from 2002, which provides a better assessment of performance of flags during three-year rolling period. Under the black-grey-white list for 2001-2003, flags on the black list in 2002 Annual Report remained unchanged and flags of Egypt, Mongolia, Taiwan (China) and Tonga joined in the black list as result of their poor performance.

## 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 84,119 deficiencies were recorded in 2003. This represented a 12% increase of number of deficiencies found, compared with 75,210 deficiencies in 2002. The deficiencies found are categorized and shown in Figure 6 and Table 6.

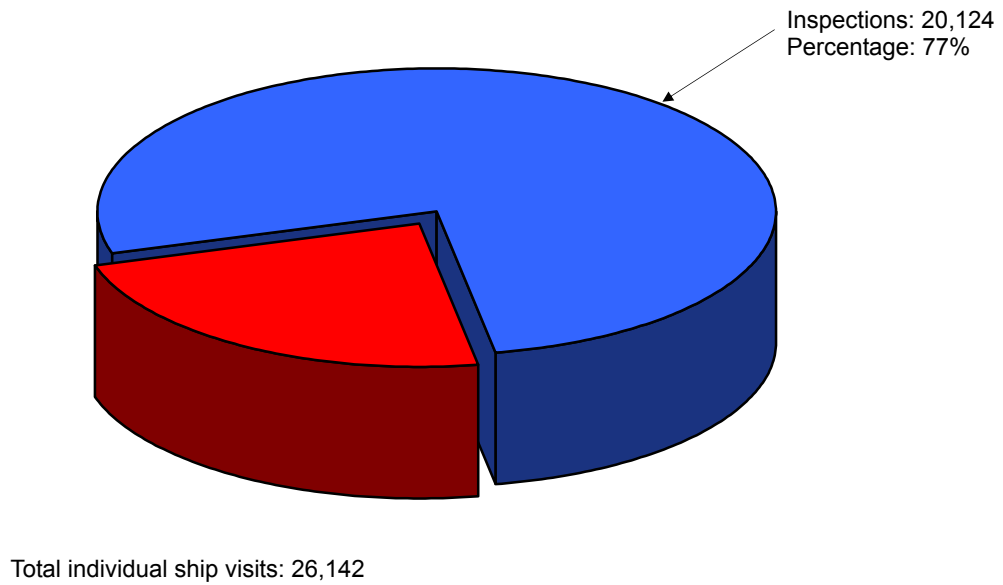
It is noted that life-saving appliances and fire safety measures remained as two major categories of deficiencies which were frequently discovered on ships. In 2003, 14,024 life-saving appliances related deficiencies and 14,249 fire safety measures related deficiencies were recorded, representing 34% of the total number of deficiencies. In addition, number of deficiencies under categories of stability, structure and related equipment, safety of navigation, radiocommunications, ISM and MARPOL-Annex I were going up and deficiencies on certification and watchkeeping for seafarers (STCW) dropped down significantly.

## OVERVIEW OF PORT STATE CONTROL RESULTS 1994 – 2003

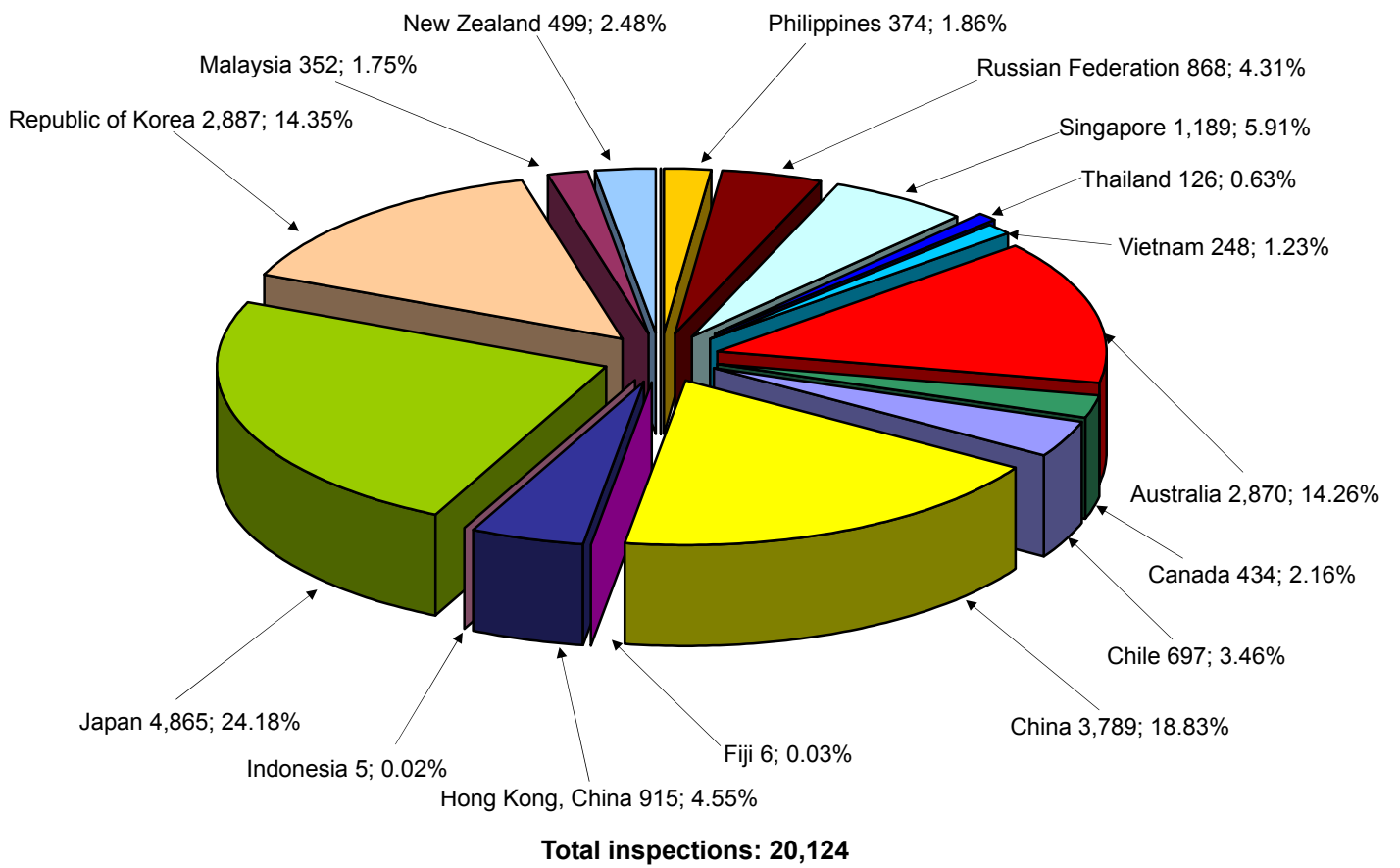
Figures 7-12 show the comparison of port State inspection results for 1994 - 2003. These figures indicate continuous improvements in the port State control activities in the region over the past nine years.



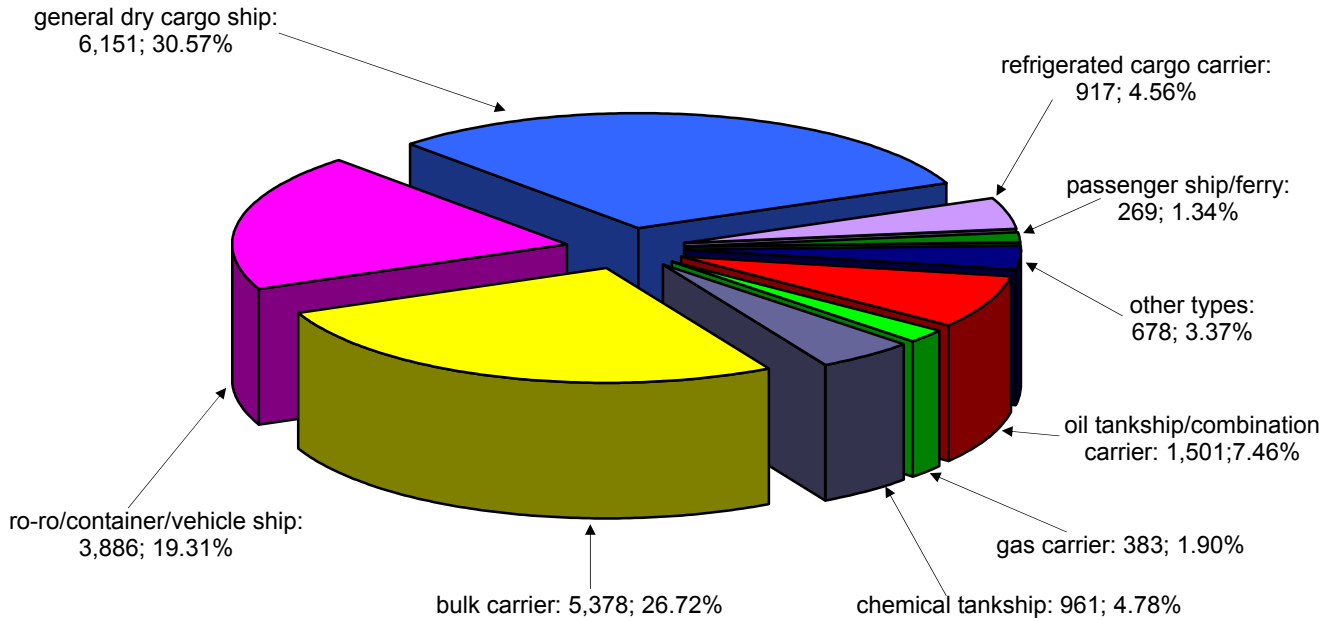
**Figure 1: INSPECTION PERCENTAGE**



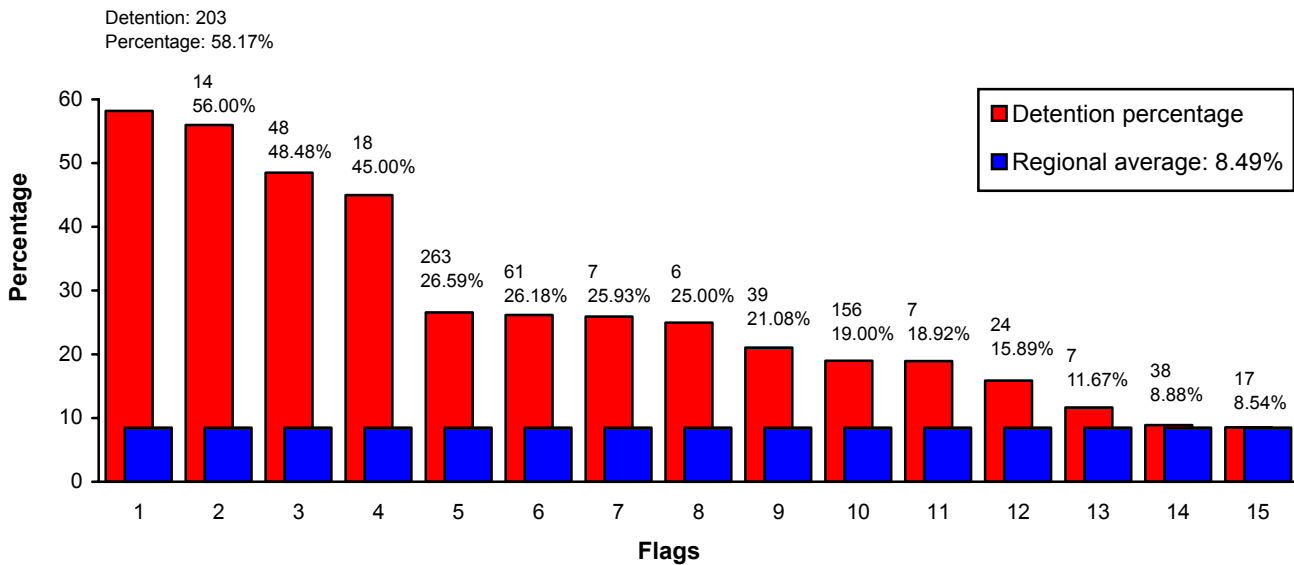
**Figure 2: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES**



**Figure 3: TYPE OF SHIP INSPECTED**



**Figure 4: DETENTIONS PER FLAG**

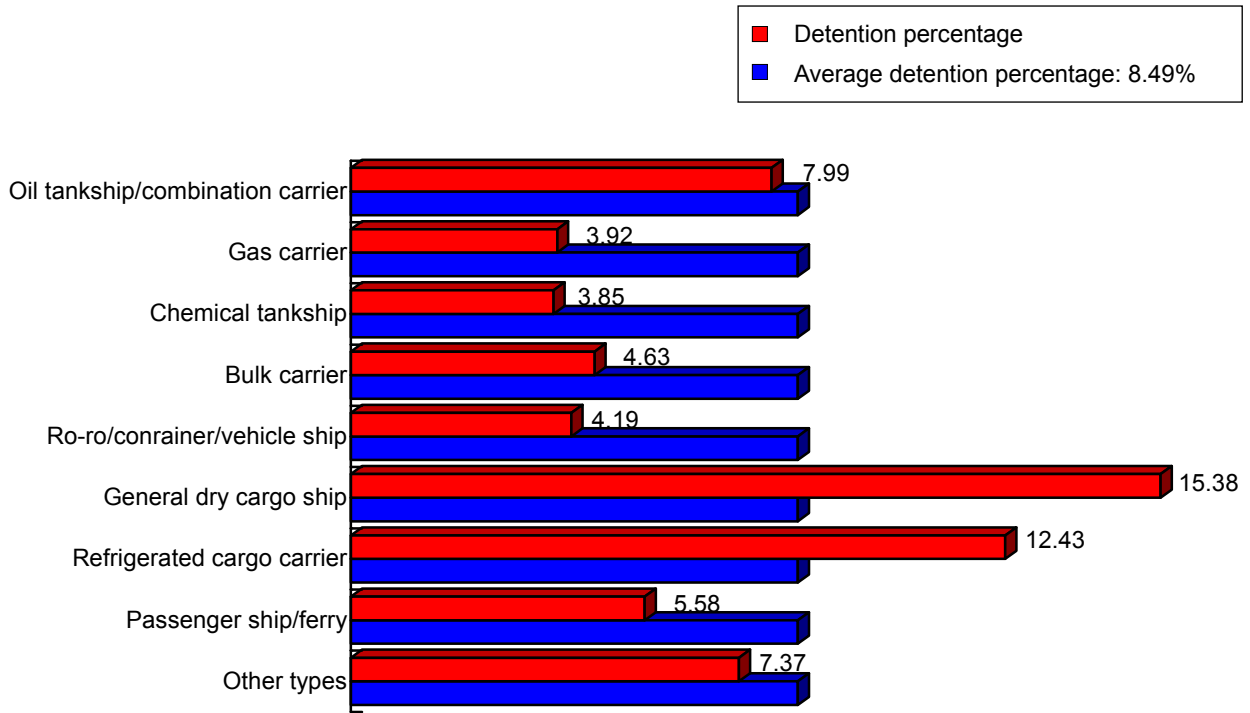


Flags:

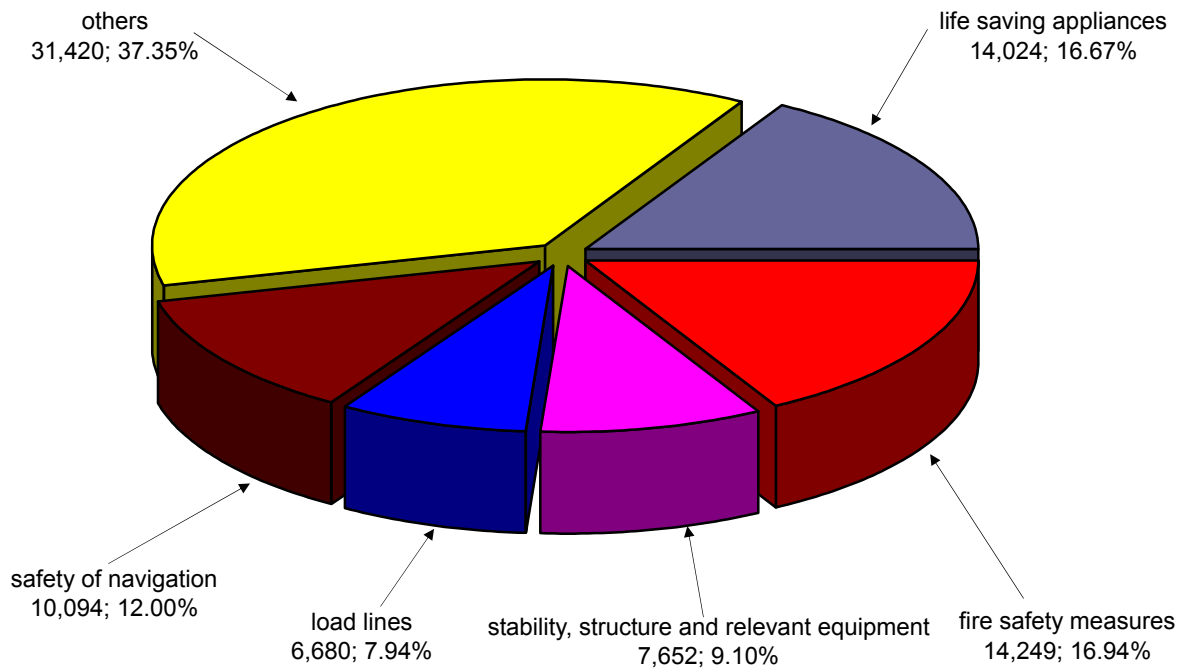
- |                              |                                      |              |                   |
|------------------------------|--------------------------------------|--------------|-------------------|
| 1. Korea, Dem. People's Rep. | 2. Honduras                          | 3. Mongolia  | 4. Bolivia        |
| 5. Cambodia                  | 6. Indonesia                         | 7. Tonga     | 8. Egypt          |
| 9. Viet Nam                  | 10. Belize                           | 11. Myanmar  | 12. Taiwan, China |
| 13. Iran                     | 14. Saint Vincent and the Grenadines | 15. Thailand |                   |

Note: Flags listed above are those flags which ships 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**

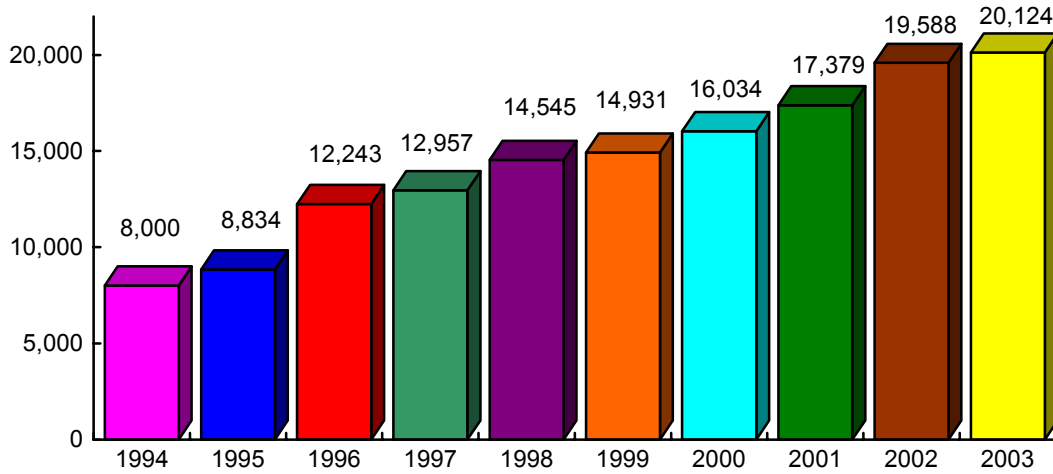


**Figure 6: DEFICIENCIES BY MAIN CATEGORIES**

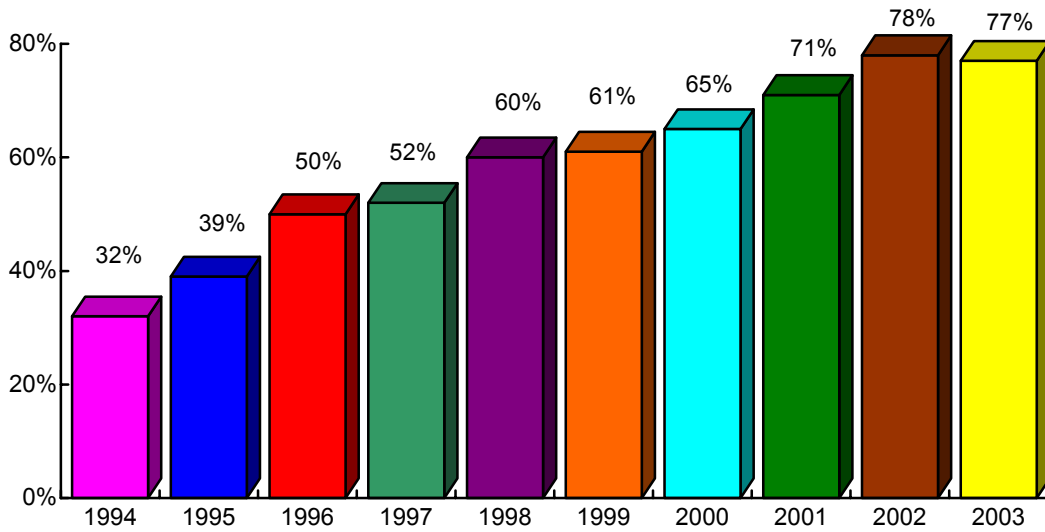


**OVERVIEW OF PORT STATE CONTROL RESULTS 1994 - 2003**

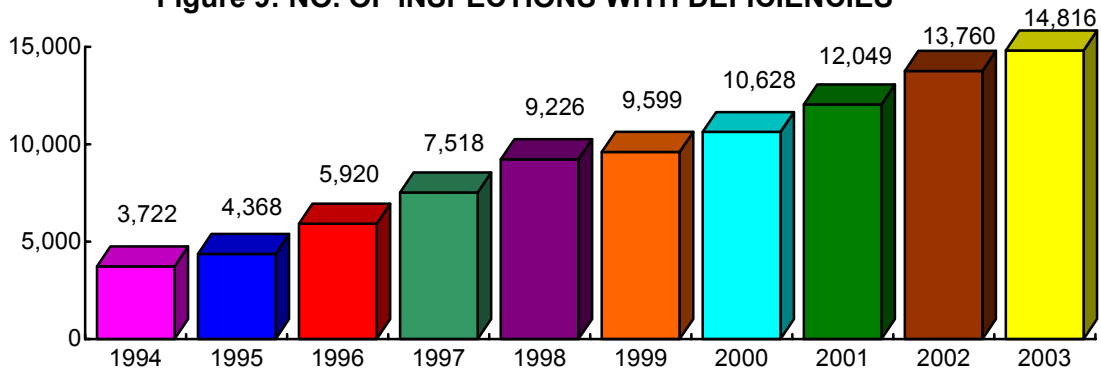
**Figure 7: NO. OF INSPECTIONS**



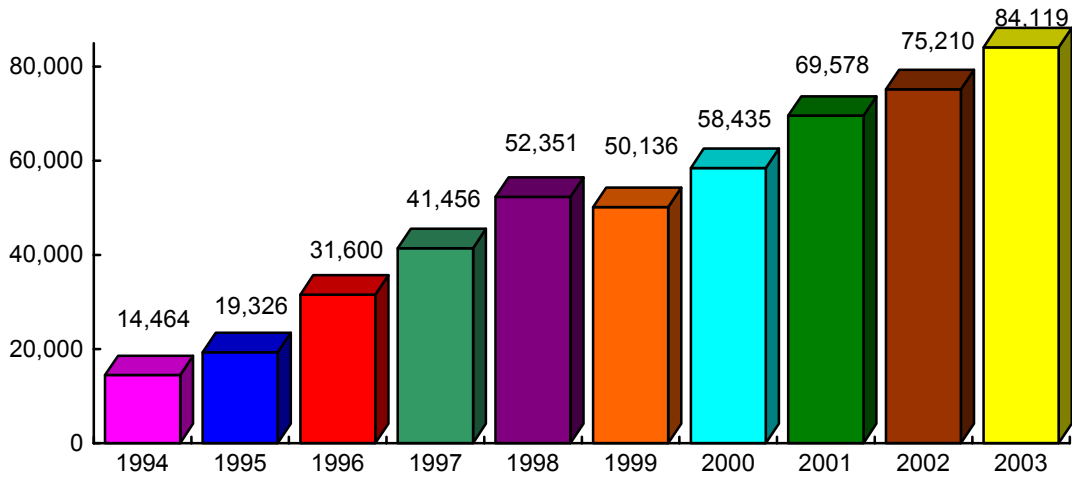
**Figure 8: INSPECTION PERCENTAGE**



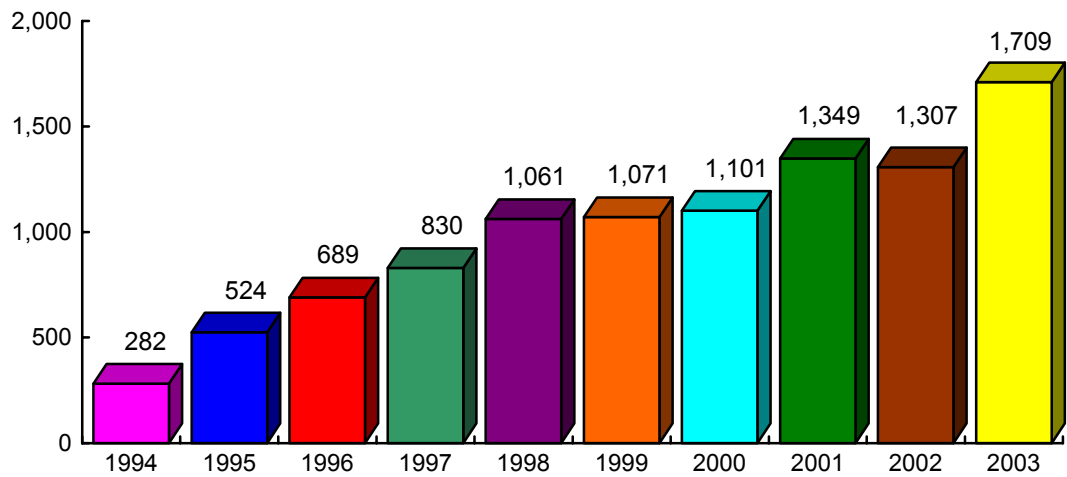
**Figure 9: NO. OF INSPECTIONS WITH DEFICIENCIES**



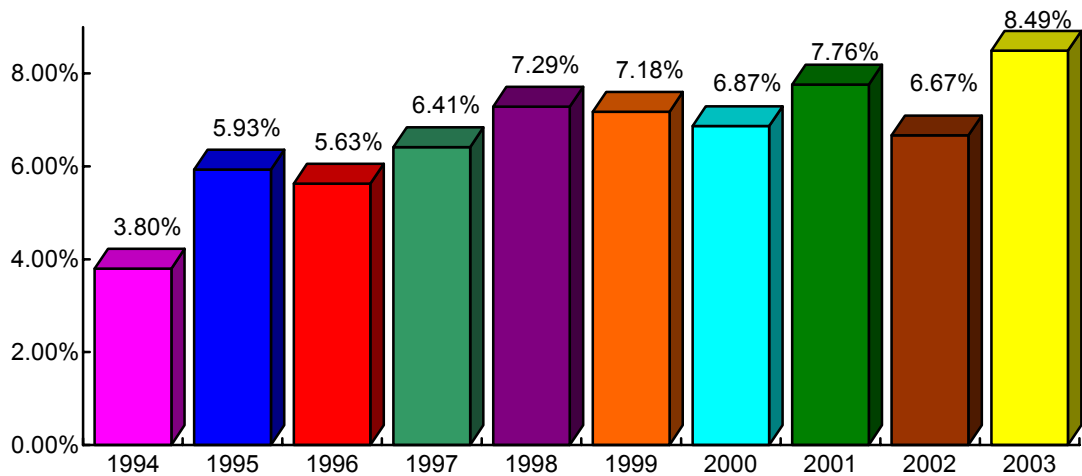
**Figure 10: NO. OF DEFICIENCIES**



**Figure 11: NO. OF DETENTIONS**



**Figure 12: 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 2003)

Authority	TONNAGE 69	LOAD LINE 66	LOAD LINE PROT 88	SOLAS 74	SOLAS PROT 78	SOLAS PROT 88	MARPOL 73/78	STCW 78	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	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	-	04/03/83	-	-	-	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	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	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	29/04/77	-
Thailand	11/06/96	30/12/92	-	18/12/84	-	-	-	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	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	-
Brunei Darussalam	23/10/86	06/03/87	-	23/10/86	23/10/86	-	23/10/86	23/10/86	05/02/87	-
Macao, China	-	-	-	-	-	-	-	-	-	-
Solomon Islands	-	-	-	-	-	-	-	01/06/94	12/03/82	-
Entry into force date	18/07/1982	21/07/1968	03/02/2000	25/05/1980	01/05/1981	03/02/2000	02/10/1983	28/04/1984	15/07/1977	28/11/1981

\* 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 2003)

<b>Authority</b>	<b>Annexes I &amp; II</b>	<b>Annex III</b>	<b>Annex IV</b>	<b>Annex V</b>	<b>Annex VI</b>
Australia	14/10/87	10/10/94	-	14/08/90	-
Canada	16/11/92	08/08/02	-	-	-
Chile	10/10/94	10/10/94	10/10/94	-	-
China	01/07/83	13/09/94	-	21/11/88	-
Fiji	-	-	-	-	-
Hong Kong, China*	11/04/85	07/03/95	-	27/03/96	-
Indonesia	21/10/86	-	-	-	-
Japan	09/06/83	09/06/83	09/06/83	09/06/83	-
Republic of Korea	23/07/84	28/02/96	-	28/02/96	-
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	-	27/05/99	08/10/00
Thailand	-	-	-	-	-
Vanuatu	13/04/89	22/04/91	-	22/04/91	-
Viet Nam	29/05/91	-	-	-	-
Brunei Darussalam	23/10/86	-	-	-	-
Macao, China	-	-	-	-	-
Solomon Islands	-	-	-	-	-
Entry into force date	02/10/1983	01/07/1992	27/09/2003	31/12/1988	-

\* Effective date of extension of instruments.

## ANNEX 2

## PORT STATE INSPECTION STATISTICS

## STATISTICS FOR 2003

Table 2: PORT STATE INSPECTIONS CARRIED OUT BY AUTHORITIES

Authority	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	No. of individual ships <sup>1)</sup>	Inspection rate (%)	Detention percentage (%)
Australia	2,870	1,622	6,826	190	3,423	83.84	6.62
Canada <sup>2)</sup>	434	298	1,342	22	1,821	23.83	5.07
Chile	697	329	864	37	1,519	45.89	5.31
China	3,789	2,988	16,435	173	10,783	35.14	4.57
Fiji	6	2	3	0	172	3.49	0
Hong Kong, China	915	819	5,038	241	5,269	17.37	26.34
Indonesia <sup>3)</sup>	5	2	33	1	4,541	0.11	20.00
Japan	4,865	4,143	28,709	639	10,775	45.15	13.13
Republic of Korea	2,887	2,068	7,898	80	9,324	30.96	2.77
Malaysia	352	144	590	4	5,337	6.60	1.14
New Zealand	499	281	1,040	20	1,121	44.51	4.01
Papua New Guinea	0	0	0	0	360		
Philippines	374	248	1,509	11	2,298	16.28	2.94
Russian Federation <sup>2)</sup>	868	679	5,432	183	1,074	80.82	21.08
Singapore	1,189	979	6,811	87	11,269	10.55	7.32
Thailand	126	53	230	0	3,046	4.14	0
Vanuatu	0	0	0	0	42		
Vietnam	248	161	1,359	21	1,434	17.29	8.47
<b>Total</b>	<b>20,124</b>	<b>14,816</b>	<b>84,119</b>	<b>1,709</b>	<b>Regional 26,142</b>	<b>Regional approx. 77%</b>	<b>Regional 8.49%</b>

1) LMIU data for 2003. (Sum of the number of individual ships visits during the first and second half of the year 2003)

2) Data are only for the Pacific ports.

3) The Authority reported that 1,067 inspections were carried out in 2003 but only 5 inspection reports were transmitted to the MOU database (APCIS).



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	1	1	10	0	0
Antigua and Barbuda	201	134	476	9	4.48
Australia	6	1	3	0	0
Austria	4	4	15	0	0
Bahamas	624	375	1,563	23	3.69
Bahrain	4	3	13	1	25.00
Bangladesh	11	9	93	3	27.27
Barbados	10	6	11	0	0
Belgium	1	0	0	0	0
Belize	821	789	5,990	156	19.00
Bermuda	50	34	104	2	4.00
Bolivia	40	39	457	18	45.00
Brazil	9	7	23	1	11.11
Brunei Darussalam	1	0	0	0	0
Cambodia	989	956	8,029	263	26.59
Cayman Islands	47	33	130	3	6.38
Chile	4	4	13	0	0
China	904	625	2,960	15	1.66
Comores	3	3	17	0	0
Cook Islands	3	3	27	0	0
Croatia	16	10	31	2	12.50
Cyprus	738	536	2,404	52	7.05
Denmark	98	54	155	0	0
Dominica	7	7	40	2	28.57
Egypt	24	20	149	6	25.00
Ethiopia	1	0	0	0	0
Fiji	3	2	3	0	0
France	45	20	49	0	0
Georgia	3	3	22	1	33.33
Germany	105	65	214	5	4.76
Gibraltar	20	13	49	0	0
Greece	371	210	825	19	5.12
Honduras	25	21	397	14	56.00
Hong Kong, China	873	566	2,596	17	1.95
India	109	88	543	8	7.34
Indonesia	233	214	2,513	61	26.18
Iran	60	46	310	7	11.67
Isle of Man	108	61	212	5	4.63
Israel	29	17	40	0	0

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Italy	71	44	170	2	2.82
Japan	146	96	419	11	7.53
Jordan	2	2	15	1	50.00
Korea, Democratic People's Republic	349	346	4,684	203	58.17
Korea, Republic of	773	628	3,349	16	2.07
Kuwait	17	11	29	1	5.88
Lao, People's Democratic Republic	4	3	34	1	25.00
Latvia	3	3	5	0	0
Lebanon	1	0	0	0	0
Liberia	1,117	658	2,417	35	3.13
Lithuania	4	3	11	0	0
Luxemburg	8	4	14	0	0
Malaysia	308	256	1,564	25	8.12
Maldives	12	11	78	1	8.33
Malta	492	357	1,735	33	6.71
Marshall Islands	271	179	664	7	2.58
Mexico	1	0	0	0	0
Mongolia	99	96	1,124	48	48.48
Morocco	3	3	34	0	0
Myanmar	37	31	276	7	18.92
Netherlands	126	73	267	6	4.76
Netherlands Antilles	41	27	103	2	4.88
New Zealand	2	0	0	0	0
Norway	273	172	587	10	3.66
Pakistan	15	13	95	1	6.67
Panama	6,389	4,466	22,708	369	5.78
Papua New Guinea	11	9	87	3	27.27
Philippines	291	214	1,036	14	4.81
Poland	1	1	7	1	100.00
Portugal	5	5	31	1	20.00
Qatar	8	6	79	2	25.00
Romania	1	0	0	0	0
Russian Federation	529	477	2,329	37	6.99
Saint Vincent and the Grenadines	428	381	2,406	38	8.88
Samoa	3	2	3	1	33.33
Saudi Arabia	15	12	45	0	0
Senegal	1	1	4	1	100.00
Seychelles	2	2	19	1	50.00
Sierra Leone	1	1	17	1	100.00

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Singapore	740	518	2,490	36	4.86
South Africa	2	2	3	0	0
Spain	4	1	11	1	25.00
Sweden	30	13	28	0	0
Switzerland	21	7	26	0	0
Syrian Arab Republic	2	2	9	0	0
Taiwan, China	151	131	903	24	15.89
Tanzania	4	3	17	0	0
Thailand	199	169	1,197	17	8.54
Togo	1	1	47	1	100.00
Tonga	27	22	122	7	25.93
Turkey	65	52	283	5	7.69
Tuvalu	6	6	51	1	16.67
Ukraine	4	3	15	1	25.00
United Arab Emirates (UAE)	4	2	13	1	25.00
United Kingdom (UK)	105	62	174	2	1.90
United States of America	44	33	89	0	0
Vanuatu	69	42	131	2	2.90
Viet Nam	185	176	1,579	39	21.08
<b>Total</b>	<b>20,124</b>	<b>14,816</b>	<b>84,119</b>	<b>1,709</b>	<b>Regional 8.49</b>

Table 4: PORT STATE INSPECTIONS PER SHIP TYPE

Type of ship	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Tanker, not otherwise specified	41	25	101	1	2.44
Combination carrier	134	89	395	4	2.99
Oil tanker	1,326	843	4,725	115	8.67
Gas carrier	383	245	1,044	15	3.92
Chemical tanker	961	672	3,111	37	3.85
Bulk carrier	5,378	3,565	16,164	249	4.63
Vehicle carrier	516	303	1,063	15	2.91
Container ship	3,186	2,107	8,941	141	4.43
Ro-Ro cargo ship	184	141	757	7	3.80
General cargo/multi-purpose ship	6,151	5,404	39,613	946	15.38
Refrigerated cargo carrier	917	732	4,825	114	12.43
Woodchip carrier	208	140	423	8	3.85
Livestock carrier	71	41	244	4	5.63
Ro-Ro passenger ship	54	46	274	5	9.26
Passenger ship	215	146	663	10	4.65
Factory ship	2	2	9	1	50.00
Heavy load carrier	43	28	119	3	6.98
Offshore service vessel	71	50	251	3	4.23
MODU & FPSO	4	3	12	1	25.00
High speed passenger craft	43	37	179	0	0
Special purpose ship	30	23	127	3	10.00
Tugboat	79	60	356	8	10.13
Others	127	114	723	19	14.96
<b>Total</b>	<b>20,124</b>	<b>14,816</b>	<b>84,119</b>	<b>1,709</b>	<b>8.49</b>

Table 5: PORT STATE INSPECTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	Total No. of inspections	Total No. of detentions	No. of RO related detentions	Detention percentage%	RO related detention percentage%	Percentage of RO related detentions%
American Bureau of Shipping	1,223	48	6	3.92	0.49	12.50
Biro Klasifikasi Indonesia	78	29	7	37.18	8.97	24.14
Bulgarski Koraben Registar	1	0	0	0	0	0
Bureau Veritas	940	57	11	6.06	1.17	19.30
China Classification Society	1,516	37	18	2.44	1.19	48.65
China Corporation Register of Shipping	342	73	24	21.35	7.02	32.88
Croatian Register of Shipping	37	6	1	16.22	2.70	16.67
Det Norske Veritas	1,312	54	11	4.12	0.84	20.37
Germanischer Lloyd	1,335	58	5	4.34	0.37	8.62
Hellenic Register of Shipping	2	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	14	5	2	35.71	14.29	40.00
INCLAMAR	49	6	0	12.24	0	0
Indian Register of Shipping	75	8	2	10.67	2.67	25.00
International Naval Surveys Bureau	3	1	0	33.33	0	0
International Register of Shipping	41	18	3	43.90	7.32	16.67
Isthmus Bureau of Shipping	257	71	39	27.63	15.18	54.93
Korean Register of Shipping	1,520	46	11	3.03	0.72	23.91
Lloyd's Register of Shipping	1,682	95	29	5.65	1.72	30.53
NV Unitas	1	0	0	0	0	0
National Cargo Bureau Inc.	1	0	0	0	0	0
Nippon Kaiji Kyokai	6,375	294	56	4.61	0.88	19.05
Panama Bureau of Shipping	50	8	3	16.00	6.00	37.50
Panama Maritime Surveyors Bureau Inc	19	6	2	31.58	10.53	33.33
Panama Register Corporation	26	2	1	7.69	3.85	50.00
Polski Rejestr Statkow	25	3	0	12.00	0	0
RINAVE Portuguesa	1	0	0	0	0	0
Register of Shipping (DPR Korea)	82	54	41	65.85	50.00	75.93
Registro Italiano Navale	127	7	3	5.51	2.36	42.86
Russian Maritime Register of Shipping	703	58	8	8.25	1.14	13.79
Turkish Lloyd	6	1	0	16.67	0	0
Viet Nam Register of Shipping	126	35	10	27.78	7.94	28.57
Other	2,155	629	217	29.19	10.07	34.50

Table 6: DEFICIENCIES BY CATEGORIES

Nature of deficiencies	No. of deficiencies
Ship's certificates and documents	2,834
Stability, structure and related equipment	7,652
Propulsion and auxiliary machinery	3,389
Alarm signals	245
Fire safety measures	14,249
Oil, chemical tankers and gas carriers	294
Lifesaving appliances	14,024
Radiocommunications	3,241
Safety of navigation	10,094
Carriage of cargo and dangerous goods	666
SOLAS related operational deficiencies	2,930
ISM related deficiencies	3,441
Bulk carriers-additional safety measures	66
Load lines	6,680
MARPOL-Annex I	5,958
MARPOL-Annex II	71
MARPOL-Annex III	8
MARPOL-Annex V	2,458
MARPOL related operational deficiencies	647
Certification and watchkeeping for seafarers	2,676
Crew and accommodation (ILO 147)	423
Food and catering (ILO 147)	152
Working spaces (ILO 147)	380
Accident prevention (ILO 147)	627
Mooring arrangements (ILO 147)	813
Other deficiencies	101
<b>Total</b>	<b>84,119</b>

## SUMMARY OF PORT STATE INSPECTION DATA 2001 – 2003

Table 7: BLACK – GREY – WHITE LISTS \*

Flag	Inspections 2001-2003	Detentions 2001-2003	Black to Grey Limit	Grey to White Limit	Excess Factor
<b>BLACK LIST</b>					
Korea, Democratic People's Republic	666	367	58		15.95
Mongolia	99	48	12		11.96
Bolivia	85	37	10		10.15
Cambodia	2,747	741	215		7.20
Indonesia	525	139	47		6.45
Belize	1,890	405	151		5.30
Viet Nam	446	90	41		4.38
Honduras	390	73	36		3.86
Bangladesh	38	10	6		3.79
Papua New Guinea	45	8	6		1.83
Tonga	83	12	10		1.59
Egypt	78	11	10		1.45
Taiwan, China	591	57	52		1.25
Russian Federation	1,424	124	116		1.18
Malaysia	1,091	96	91		1.15
Saint Vincent and the Grenadines	1,189	103	98		1.13
Thailand	656	59	57		1.08
<b>GREY LIST</b>					
Turkey	207	20	21	8	0.92
Iran	195	18	20	7	0.84
Qatar	30	4	5	-1	0.84
Myanmar	128	12	14	4	0.79
Kuwait	54	5	7	0	0.67
Cayman Islands	131	10	14	4	0.58
India	325	24	31	15	0.58
Pakistan	40	3	6	0	0.53
Malta	1,355	92	111	79	0.41
Netherlands Antilles	101	6	12	2	0.39
Cyprus	2,203	146	174	134	0.30
Croatia	72	3	9	1	0.25

Flag	Inspections 2001-2003	Detentions 2001-2003	Black to Grey Limit	Grey to White Limit	Excess Factor
Saudi Arabia	45	1	6	0	0.18
Gibraltar	34	0	5	-1	0.10
Italy	170	7	18	6	0.09
Sweden	65	1	8	1	0.04
<b>WHITE LIST</b>					
Bermuda	134	4		4	-0.01
United States of America	144	4		5	-0.17
Antigua and Barbuda	556	25		29	-0.24
Japan	495	20		25	-0.38
Germany	424	16		21	-0.42
Switzerland	61	0		0	-0.46
Netherlands	392	14		19	-0.47
Panama	18,423	959		1,232	-0.51
Israel	64	0		1	-0.55
Greece	1,048	40		59	-0.68
Philippines	1,087	41		62	-0.71
Vanuatu	223	5		9	-0.73
Isle of Man	284	7		12	-0.77
Singapore	2,310	85		141	-0.87
Korea, Republic of	2,167	74		132	-0.95
France	127	1		4	-0.98
Bahamas	1,676	53		100	-1.01
Denmark	306	6		14	-1.02
Marshall Islands	579	14		30	-1.07
Norway	777	20		42	-1.08
Liberia	3,259	102		204	-1.11
United Kingdom (UK)	300	5		13	-1.15
China	2,634	52		162	-1.51
Hong Kong, China	2,026	38		122	-1.52

\* See explanatory note on page 40.

$p=7\%$

$z_{95\%}=1.645$

$q=3\%$



Table 8: INSPECTIONS AND DETENTIONS PER FLAG

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2001	2002	2003	Total	2001	2002	2003	Total	
Afghanistan	0	1	0	1	0	0	0	0	0
Algeria	3	0	1	4	2	0	0	2	50.00
American Samoa	1	0	0	1	0	0	0	0	0
Antigua and Barbuda	135	220	201	556	8	8	9	25	4.50
Argentina	0	2	0	2	0	1	0	1	50.00
Australia	10	10	6	26	0	0	0	0	0
Austria	3	3	4	10	0	0	0	0	0
Bahamas	476	576	624	1,676	15	15	23	53	3.16
Bahrain	3	6	4	13	0	0	1	1	7.69
Bangladesh	13	14	11	38	6	1	3	10	26.32
Barbados	5	8	10	23	0	1	0	1	4.35
Belgium	0	2	1	3	0	0	0	0	0
Belize	502	567	821	1,890	138	111	156	405	21.43
Bermuda	43	41	50	134	2	0	2	4	2.99
Bolivia	24	21	40	85	10	9	18	37	43.53
Brazil	3	5	9	17	1	1	1	3	17.65
Brunei Darussalam	0	0	1	1	0	0	0	0	0
Bulgaria	4	7	0	11	1	1	0	2	18.18
Cambodia	787	971	989	2,747	232	246	263	741	26.97
Cameroon	1	0	0	1	0	0	0	0	0
Canada	0	1	0	1	0	0	0	0	0
Cayman Islands	38	46	47	131	1	6	3	10	7.63
Channel Islands	3	0	0	3	0	0	0	0	0
Chile	2	5	4	11	1	0	0	1	9.09
China	869	861	904	2,634	22	15	15	52	1.97
Colombia	1	0	0	1	0	0	0	0	0
Comores	1	2	3	6	0	0	0	0	0
Cook Islands	2	3	3	8	0	0	0	0	0
Croatia	21	35	16	72	0	1	2	3	4.17
Cyprus	693	772	738	2,203	45	49	52	146	6.63
Denmark	118	90	98	306	6	0	0	6	1.96
Dominica	0	0	7	7	0	0	2	2	28.57
Egypt	28	26	24	78	1	4	6	11	14.10
Ethiopia	1	3	1	5	0	0	0	0	0
Fiji	4	4	3	11	0	1	0	1	9.09

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2001	2002	2003	Total	2001	2002	2003	Total	
Finland	1	0	0	1	0	0	0	0	0
France	37	46	45	128	1	0	0	1	0.78
Georgia	4	6	3	13	0	2	1	3	23.08
Germany	138	181	105	424	8	3	5	16	3.77
Gibraltar	2	12	20	34	0	0	0	0	0
Greece	306	371	371	1,048	9	12	19	40	3.82
Honduras	202	163	25	390	33	26	14	73	18.72
Hong Kong, China	502	651	873	2,026	10	11	17	38	1.88
India	100	116	109	325	5	11	8	24	7.38
Indonesia	148	144	233	525	47	31	61	139	26.48
Iran	73	62	60	195	5	6	7	18	9.23
Isle of Man	75	101	108	284	0	2	5	7	2.46
Israel	12	23	29	64	0	0	0	0	0
Italy	33	66	71	170	3	2	2	7	4.12
Japan	177	172	146	495	5	4	11	20	4.04
Jordan	0	0	2	2	0	0	1	1	50.00
Korea, Democratic People's Republic	151	166	349	666	65	99	203	367	55.11
Korea, Republic of	658	736	773	2,167	41	17	16	74	3.41
Kuwait	18	19	17	54	3	1	1	5	9.26
Kyrgyzstan	1	0	0	1	0	0	0	0	0
Lao, People's Democratic Republic	1	2	4	7	0	1	1	2	28.57
Latvia	3	0	3	6	0	0	0	0	0
Lebanon	1	1	1	3	0	0	0	0	0
Liberia	984	1,158	1,117	3,259	30	37	35	102	3.13
Lithuania	1	5	4	10	0	3	0	3	30.00
Luxemburg	3	5	8	16	0	0	0	0	0
Malaysia	419	364	308	1,091	36	35	25	96	8.80
Maldives	8	7	12	27	1	1	1	3	11.11
Malta	408	455	492	1,355	28	31	33	92	6.79
Marshall Islands	118	190	271	579	3	4	7	14	2.42
Mauritius	1	2	0	3	0	0	0	0	0
Mexico	0	0	1	1	0	0	0	0	0
Mongolia	0	0	99	99	0	0	48	48	48.48
Morocco	0	1	3	4	0	0	0	0	0
Myanmar	43	48	37	128	5	0	7	12	9.38
Netherlands	118	148	126	392	1	7	6	14	3.57

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2001	2002	2003	Total	2001	2002	2003	Total	
Netherlands Antilles	24	36	41	101	0	4	2	6	5.94
New Zealand	2	4	2	8	0	0	0	0	0
Nigeria	1	0	0	1	1	0	0	1	100.00
Norway	237	267	273	777	4	6	10	20	2.57
Pakistan	10	15	15	40	2	0	1	3	7.50
Panama	5,705	6,329	6,389	18,423	314	276	369	959	5.21
Papua New Guinea	19	15	11	45	2	3	3	8	17.78
Peru	0	1	0	1	0	0	0	0	0
Philippines	423	373	291	1,087	12	15	14	41	3.77
Poland	4	0	1	5	0	0	1	1	20.00
Portugal	1	5	5	11	0	0	1	1	9.09
Qatar	7	15	8	30	1	1	2	4	13.33
Romania	0	0	1	1	0	0	0	0	0
Russian Federation	386	509	529	1,424	45	42	37	124	8.71
Saint Helena	1	0	0	1	0	0	0	0	0
Saint Vincent and the Grenadines	350	411	428	1,189	24	41	38	103	8.66
Samoa	2	2	3	7	0	0	1	1	14.29
Sao Tome and Principe	13	5	0	18	3	1	0	4	22.22
Saudi Arabia	13	17	15	45	1	0	0	1	2.22
Senegal	0	0	1	1	0	0	1	1	100.00
Seychelles	0	1	2	3	0	0	1	1	33.33
Sierra Leone	0	0	1	1	0	0	1	1	100.00
Singapore	763	807	740	2,310	19	30	36	85	3.68
Slovakia	2	0	0	2	0	0	0	0	0
South Africa	1	1	2	4	0	0	0	0	0
Spain	1	2	4	7	0	0	1	1	14.29
Sri Lanka	2	2	0	4	0	0	0	0	0
Sweden	16	19	30	65	0	1	0	1	1.54
Switzerland	12	28	21	61	0	0	0	0	0
Syrian Arab Republic	0	0	2	2	0	0	0	0	0
Taiwan, China	213	227	151	591	20	13	24	57	9.64
Tanzania	1	0	4	5	0	0	0	0	0
Thailand	222	235	199	656	23	19	17	59	8.99
Togo	0	0	1	1	0	0	1	1	100.00
Tonga	24	32	27	83	1	4	7	12	14.46
Trinidad and Tobago	0	1	0	1	0	1	0	1	100.00

Flag	Number of inspections				Number of detentions				3-year rolling average detention %
	2001	2002	2003	Total	2001	2002	2003	Total	
Turkey	77	65	65	207	7	8	5	20	9.66
Tuvalu	2	5	6	13	1	1	1	3	23.08
Ukraine	2	11	4	17	0	1	1	2	11.76
United Arab Emirates (UAE)	5	3	4	12	1	0	1	2	16.67
United Kingdom (UK)	76	119	105	300	1	2	2	5	1.67
United States of America	35	65	44	144	2	2	0	4	2.78
Vanuatu	69	85	69	223	2	1	2	5	2.24
Viet Nam	117	144	185	446	32	19	39	90	20.18
Other	1	9	0	10	1	0	0	1	10.00
<b>Total</b>	<b>17,379</b>	<b>19,588</b>	<b>20,124</b>	<b>57,091</b>	<b>1,349</b>	<b>1,307</b>	<b>1,709</b>	<b>4,365</b>	<b>7.65</b>

Figure 13: COMPARISON OF INSPECTIONS PER SHIP TYPE

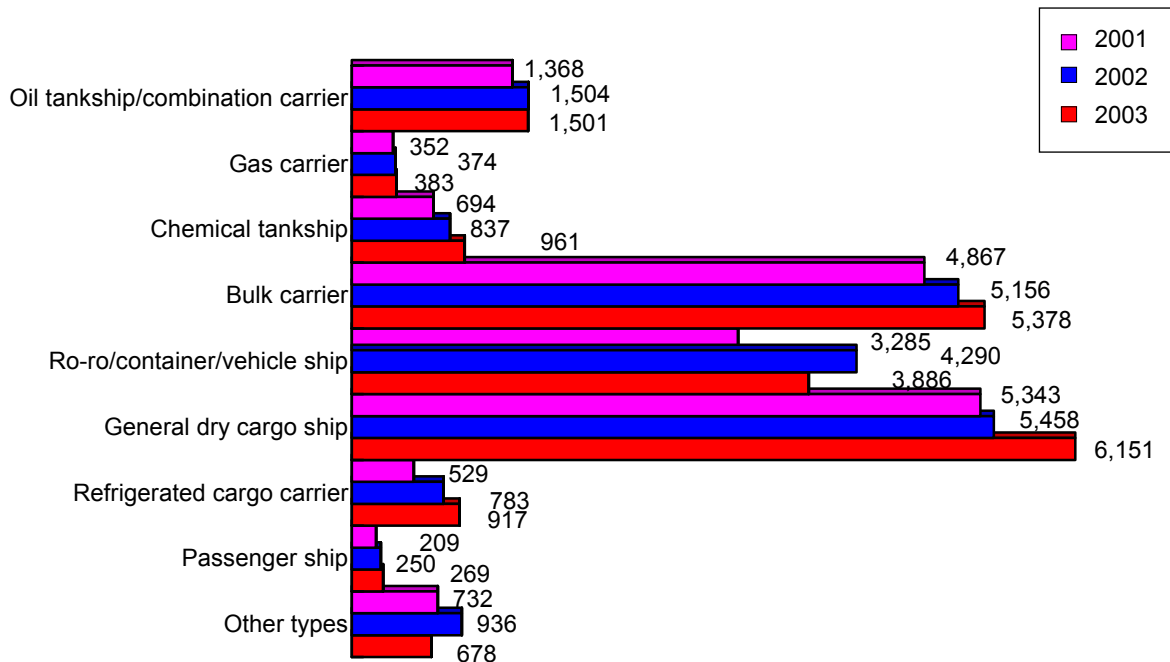
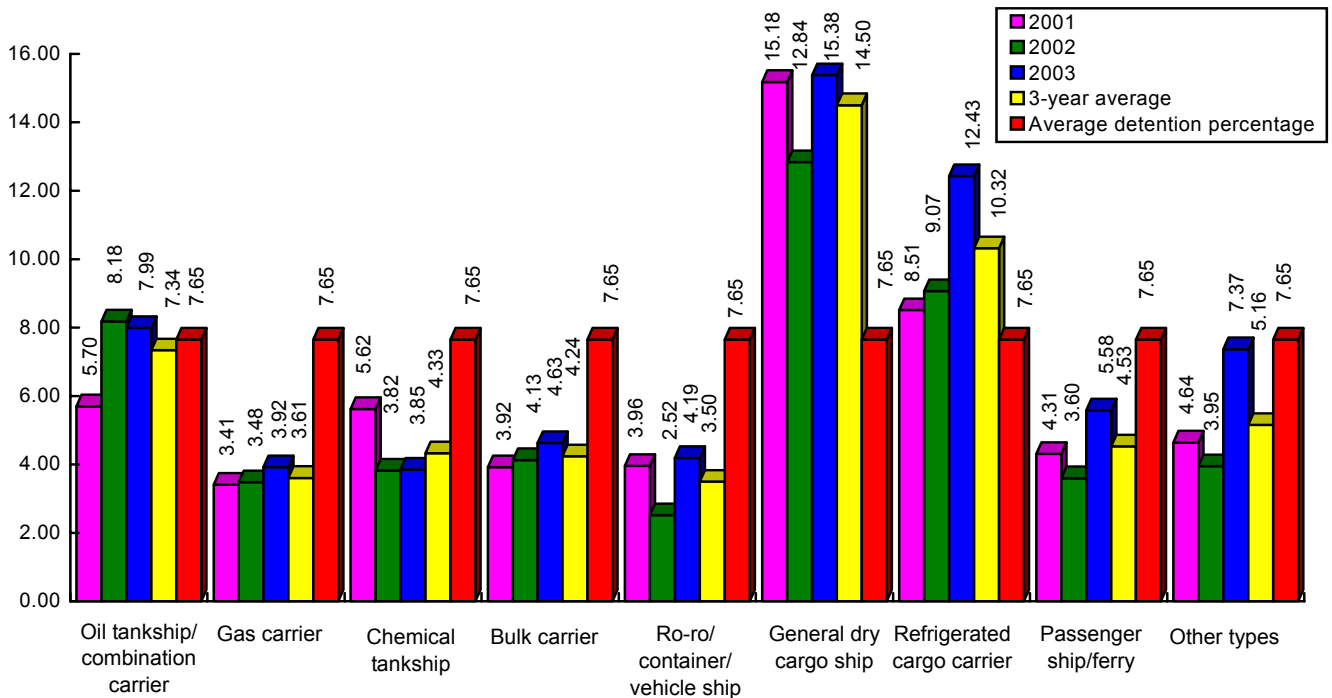


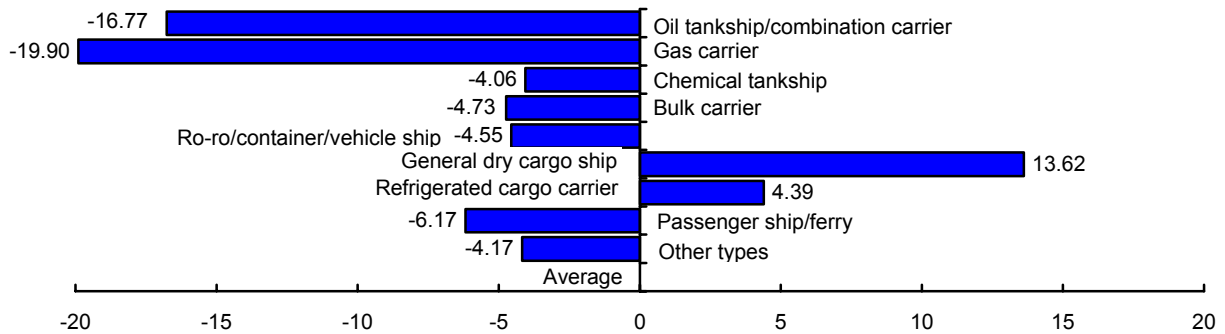
Figure 14: COMPARISON OF DETENTIONS PER SHIP TYPE



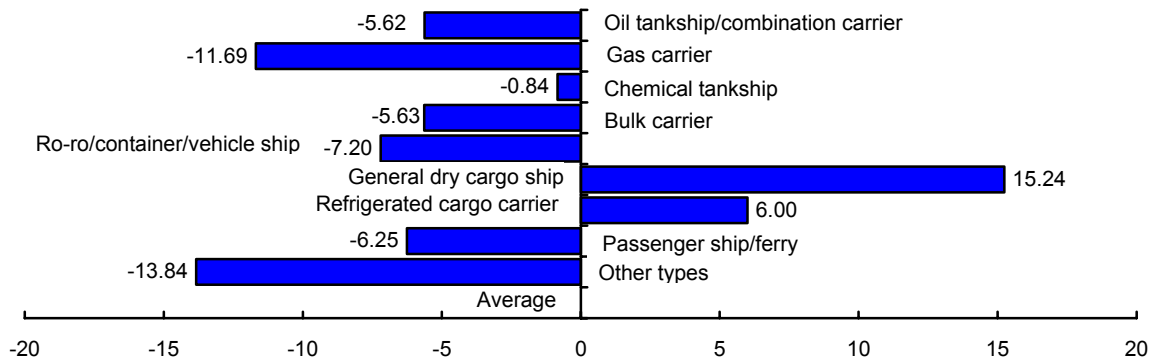
**Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE**

Type of ship	Number of inspections				Number of detentions				Average detention percentage %
	2001	2002	2003	Total	2001	2002	2003	Total	
Tanker, not otherwise specified	177	134	41	352	3	5	1	9	2.56
Combination carrier	155	153	134	442	3	3	4	10	2.26
Oil tanker	1,036	1,217	1,326	3,579	72	115	115	302	8.44
Gas carrier	352	374	383	1,109	12	13	15	40	3.61
Chemical tanker	694	837	961	2,492	39	32	37	108	4.33
Bulk carrier	4,867	5,156	5,378	15,401	191	213	249	653	4.24
Vehicle carrier	405	448	516	1,369	4	14	15	33	2.41
Container ship	2,627	3,563	3,186	9,376	117	84	141	342	3.65
Ro-Ro cargo ship	253	279	184	716	9	10	7	26	3.63
General cargo/multi-purpose ship	5,343	5,458	6,151	16,952	811	701	946	2,458	14.50
Refrigerated cargo carrier	529	783	917	2,229	45	71	114	230	10.32
Woodchip carrier	167	198	208	573	3	5	8	16	2.79
Livestock carrier	74	81	71	226	5	3	4	12	5.31
Ro-Ro Passenger ship	26	45	54	125	2	3	5	10	8.00
Passenger ship	183	205	215	603	7	6	10	23	3.81
Factory ship	2	9	2	13	0	5	1	6	46.15
Heavy load carrier	28	43	43	114	2	3	3	8	7.02
Offshore service vessel	120	150	71	341	3	0	3	6	1.76
MODU & FPSO	1	5	4	10	0	0	1	1	10.00
High speed passenger craft	9	14	43	66	0	0	0	0	0
Special purpose ship	39	39	30	108	6	4	3	13	12.04
Tugboat	209	290	79	578	9	3	8	20	3.46
Fishing vessel	4	6	0	10	0	0	0	0	0
Others	79	101	127	307	6	14	19	39	12.70
<b>Total</b>	<b>17,379</b>	<b>19,588</b>	<b>20,124</b>	<b>57,091</b>	<b>1,349</b>	<b>1,307</b>	<b>1,709</b>	<b>4,365</b>	<b>7.65</b>

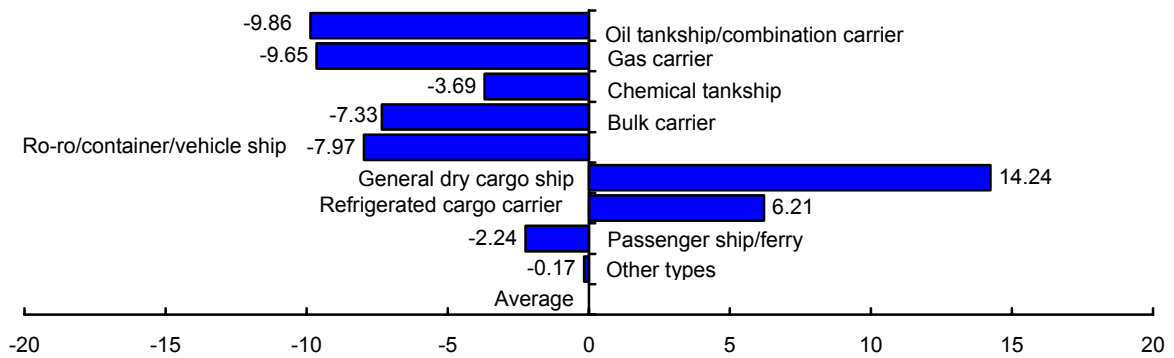
Figure 15: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE



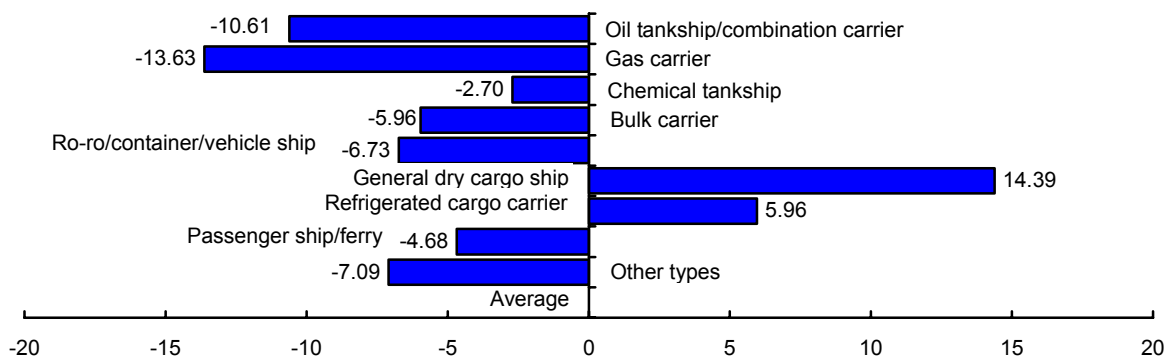
(a) Year 2001



(b) Year 2002



(c) Year 2003



(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 %
	2001	2002	2003	Total	2001	2002	2003	Total	
Oil tankship/combination carrier	1,368	1,504	1,501	4,373	719	972	957	2,648	60.55
Gas carrier	352	374	383	1,109	174	219	245	638	57.53
Chemical tankship	694	837	961	2,492	453	581	672	1,706	68.46
Bulk carrier	4,867	5,156	5,378	15,401	3,144	3,332	3,565	10,041	65.20
Ro-ro/container/vehicle ship	3,285	4,290	3,886	11,461	2,128	2,705	2,551	7,384	64.43
General dry cargo ship	5,343	5,458	6,151	16,952	4,432	4,666	5,404	14,502	85.55
Refrigerated cargo carrier	529	783	917	2,229	390	597	732	1,719	77.12
Passenger ship	209	250	269	728	132	160	192	484	66.48
Other types	732	936	678	2,346	477	528	498	1,503	64.07
<b>Total</b>	<b>17,379</b>	<b>19,588</b>	<b>20,124</b>	<b>57,091</b>	<b>12,049</b>	<b>13,760</b>	<b>14,816</b>	<b>40,625</b>	<b>71.16</b>



Table 11: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	Total No. of inspections 2002-2003	Total No. of detentions 2002-2003	No. of RO related detentions 2002-2003	2-year average detention percentage%	2-year average RO related detention percentage%	2-year average percentage of RO related detentions%
American Bureau of Shipping	2,584	109	16	4.22	0.62	14.68
Biro Klasifikasi Indonesia	174	42	12	24.14	6.90	28.57
Bulgarski Koraben Registar	4	0	0	0	0	0
Bureau Securitas	1	0	0	0	0	0
Bureau Veritas	1,873	110	32	5.87	1.71	29.09
China Classification Society	2,939	74	28	2.52	0.95	37.84
China Corporation Register of Shipping	648	109	38	16.82	5.86	34.86
Croatian Register of Shipping	115	7	1	6.09	0.87	14.29
Cyprus Bureau of Shipping	78	0	0	0	0	0
Det Norske Veritas	2,567	100	22	3.90	0.86	22.00
Germanischer Lloyd	2,713	113	10	4.17	0.37	8.85
Hellenic Register of Shipping	3	0	0	0	0	0
Honduras International Surveying and Inspection Bureau	87	14	8	16.09	9.20	57.14
INCLAMAR	87	9	2	10.34	2.30	22.22
Indian Register of Shipping	136	11	3	8.09	2.21	27.27
International Naval Surveys Bureau	12	3	2	25.00	16.67	66.67
International Register of Shipping	66	26	6	39.39	9.09	23.08
Isthmus Bureau of Shipping	385	107	56	27.79	14.55	52.34
Korean Register of Shipping	3,055	87	21	2.85	0.69	24.14
Lloyd's Register of Shipping	3,342	169	44	5.06	1.32	26.04
National Cargo Bureau Inc.	1	0	0	0	0	0
Nippon Kaiji Kyokai	12,682	541	118	4.27	0.93	21.81
NV Unitas	2	0	0	0	0	0
Panama Bureau of Shipping	94	16	8	17.02	8.51	50.00
Panama Maritime Surveyors Bureau Inc	155	14	6	9.03	3.87	42.86
Panama Register Corporation	62	8	2	12.90	3.23	25.00
Polski Rejestr Statkow	49	6	0	12.24	0	0
R. J. Del Pan	3	1	0	33.33	0	0
Register of Shipping (Albania)	1	0	0	0	0	0
Register of Shipping (DPR Korea)	164	115	93	70.12	56.71	80.87
Registro Cubano de Buques	1	0	0	0	0	0
Registro Italiano Navale	253	14	5	5.53	1.98	35.71
RINAVE Portuguesa	4	0	0	0	0	0
Romanian Naval Register	1	0	0	0	0	0
Russian Maritime Register of Shipping	1,376	118	16	8.58	1.16	13.56
Russian River Register	1	0	0	0	0	0
Turkish Lloyd	10	3	1	30.00	10.00	33.33
Viet Nam Register of Shipping	233	48	14	20.60	6.01	29.17
Other	3,751	1,042	376	27.78	10.02	36.08

Note: Since RO related data are collected from 2002, this table only shows RO related data for 2002-2003.

**Figure 16: COMPARISON OF NUMBER OF DEFICIENCIES BY MAIN CATEGORIES**

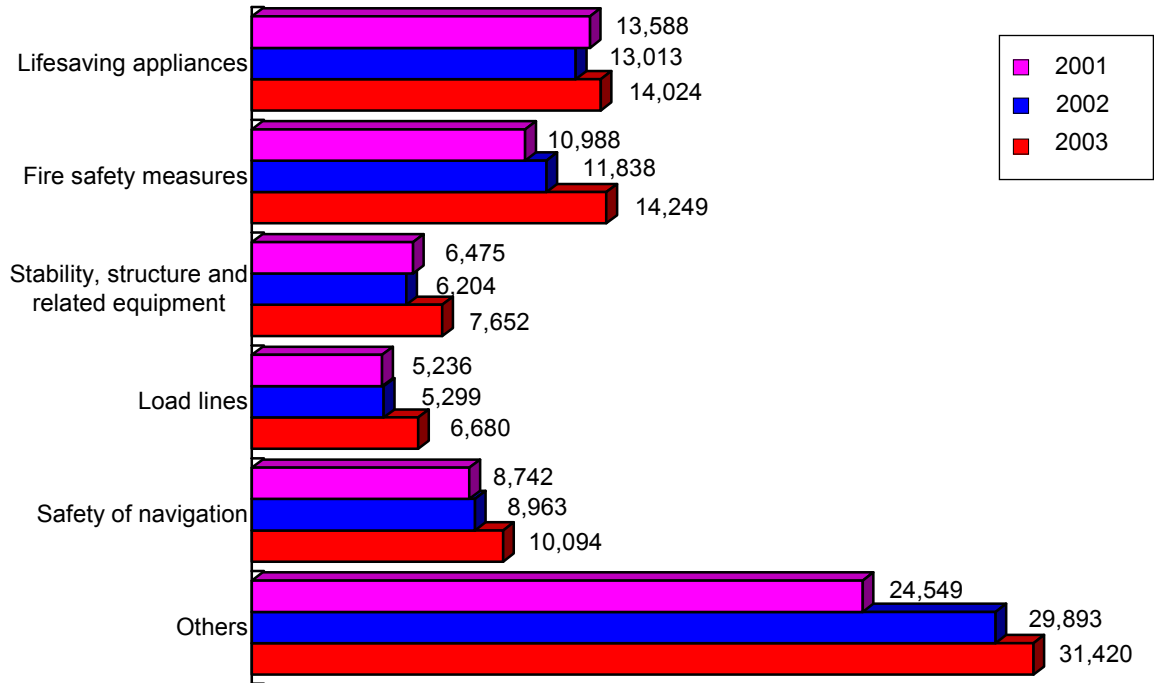
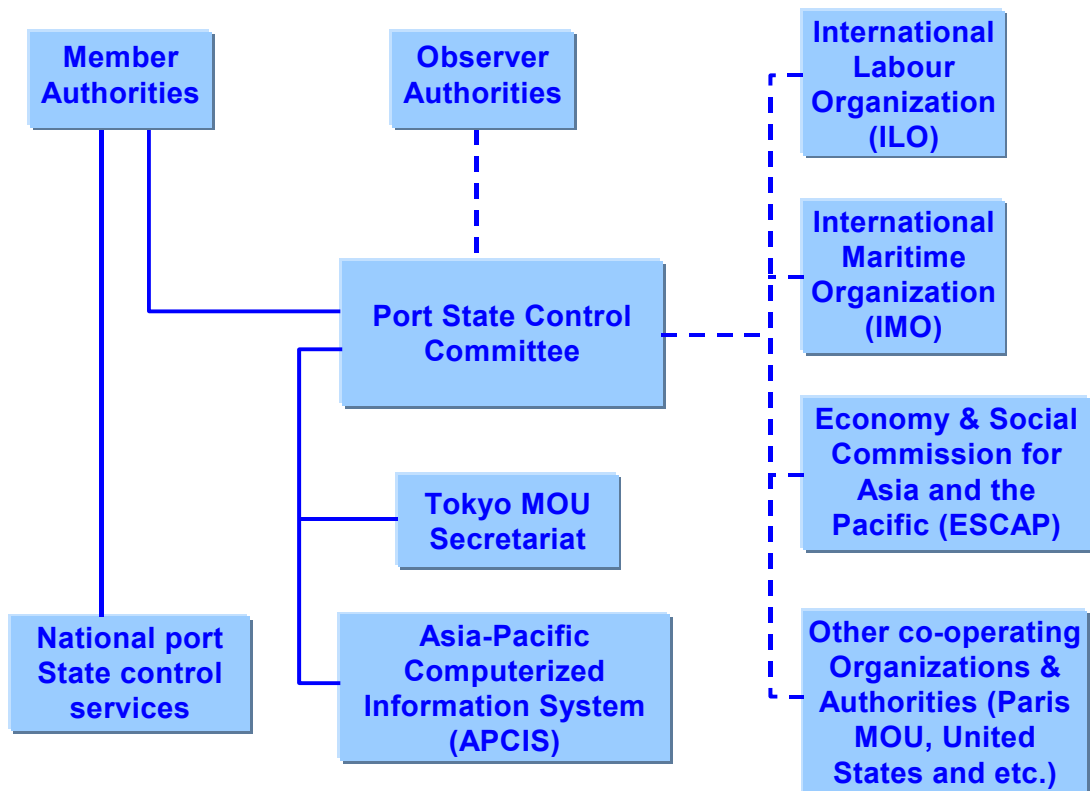


Table 12: COMPARISON OF DEFICIENCIES BY CATEGORIES

Nature of deficiency	Number of deficiencies		
	2001	2002	2003
Ship's certificates and documents	2,643	2,379	2,834
Stability, structure and related equipment	6,475	6,204	7,652
Propulsion and auxiliary machinery	2,694	3,001	3,389
Alarm signals	203	274	245
Fire safety measures	10,988	11,838	14,249
Oil, chemical tankers and gas carriers	157	225	294
Lifesaving appliances	13,588	13,013	14,024
Radiocommunications	3,300	2,875	3,241
Safety of navigation	8,742	8,963	10,094
Carriage of cargo and dangerous goods	590	772	666
SOLAS related operational deficiencies	2,833	2,788	2,930
ISM related deficiencies	792	2,762	3,441
Bulk carriers-additional safety measures	17	41	66
Load lines	5,236	5,299	6,680
MARPOL-Annex I	4,916	5,175	5,958
MARPOL-Annex II	73	71	71
MARPOL-Annex III	21	11	8
MARPOL-Annex V	1,542	2,337	2,458
MARPOL related operational deficiencies	804	528	647
Certification and watchkeeping for seafarers	860	4,065	2,676
Crew and accommodation (ILO 147)	939	606	423
Food and catering (ILO 147)	419	194	152
Working spaces (ILO 147)	330	374	380
Accident prevention (ILO 147)	649	572	627
Mooring arrangements (ILO 147)	639	752	813
Other deficiencies	128	91	101
<b>Total</b>	<b>69,578</b>	<b>75,210</b>	<b>84,119</b>

### ANNEX 3

## ORGANIZATIONAL STRUCTURE OF THE TOKYO MOU



## EXPLANATORY NOTE ON THE BLACK – GREY – WHITE LISTS

The Port State Control Committee adopted the new method for assessment of performance of flags which is the same as that is used by the Paris MOU. 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:

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

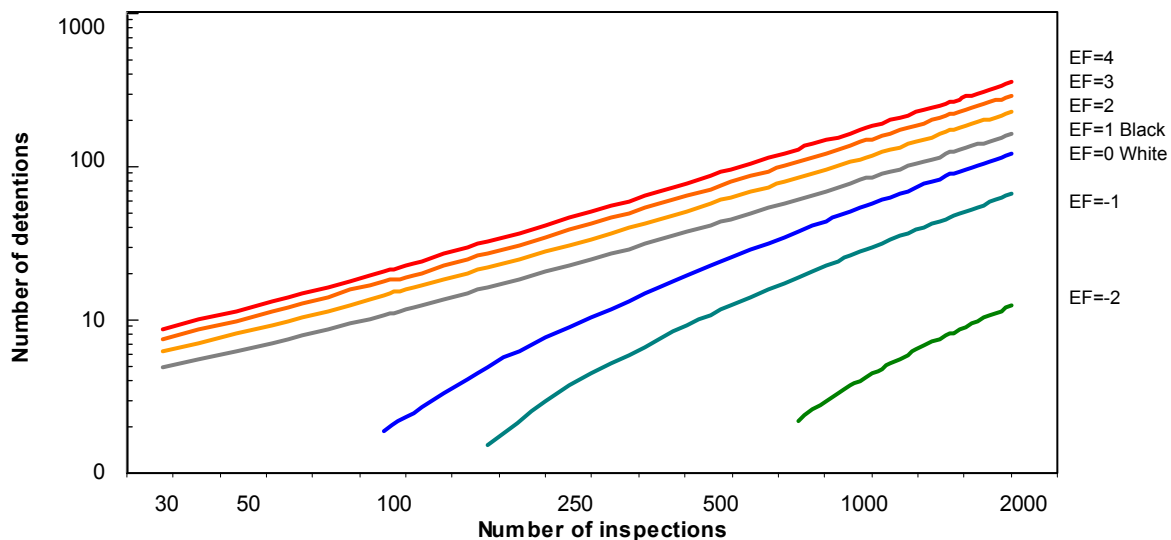
$$u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

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 Mongolia were subject to 99 inspections of which 48 resulted in a detention. The "black to grey limit" is 12 detentions. The excess factor is 11.96.

$N$  = total inspections

$P$  = 7%

$Q$  = 3%

$Z$  = 1.645

How to determine the black to grey limit:

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

$$u_{black - to - grey} = 99 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{99 \cdot 0.07 \cdot 0.93}$$

$$u = 12$$

The excess factor is 11.96. 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 10.96, and the outcome has to be added to the normal value for 'p':

$$p + 10.96q = 0.07 + (10.96 \cdot 0.03) = 0.3988$$

$$u_{excessfactor} = 99 \cdot 0.3988 + 0.5 + 1.645 \cdot \sqrt{99 \cdot 0.3988 \cdot 0.6012}$$

$$u_{excessfactor} = 48$$

**Example flag on Grey list:**

Ships of Cyprus were subject to 2,203 inspections, of which 146 resulted in a detention. The "black to grey limit" is 174 and the "grey to white limit" is 134. The excess factor is 0.30.

How to determine the black to grey limit:

$$u_{black - to - grey} = 2,203 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{2,203 \cdot 0.07 \cdot 0.93}$$

$$u_{black-to-grey} = 174$$

How to determine the grey to white limit:

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

$$u_{white - to - grey} = 2,203 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{2,203 \cdot 0.07 \cdot 0.93}$$

$$u_{white-to-grey} = 134$$

To determine the excess factor the following formula is used:

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

$$ef = (146 - 134.01) / (174.41 - 134.01)$$

$$ef = 0.30$$

**Example flag on White list:**

Ships of Germany were subject to 424 inspections of which 16 resulted in detention. The "grey to white limit" is 21 detentions. The excess factor is -0.42.

How to determine the grey to white limit:

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

$$u_{\text{white-to-grey}} = 424 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{424 \cdot 0.07 \cdot 0.93}$$

$$u_{\text{white-to-grey}} = 21$$

The excess factor is -0.42. 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 -0.42, and the outcome has to be added to the normal value for 'p':

$$p + (-0.42q) = 0.07 + (-0.42 \cdot 0.03) = 0.0574$$

$$u_{\text{excessfactor}} = 424 \cdot 0.0574 - 0.5 - 1.645 \cdot \sqrt{424 \cdot 0.0574 \cdot 0.9426}$$

$$u_{\text{excessfactor}} = 16$$

## TOKYO MOU SECRETARIAT

The permanent 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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Fumiko Akimoto  
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