# **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 formally accepted and 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, Acurdo 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).

#### **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

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 of MOU publicity the 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 system targeting 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 а trial basis. Upon experiences gained and more analysis obtained, the ship targeting system will be improved and implemented on a permanent basis.

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

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 twelfth Committee meeting, Reñaca, March 2003

Committee The 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 2003. The in Committee discussed and agreed with the proposal on carrying out a concentrated campaign inspection 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 JOINTMINISTERIAL 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 Second Joint Ministerial Canada. а the Paris and Conference of 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 aroup 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, Kong Hong 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



Fellowship training for PSC officers

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. 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 international perspective, an establishment of regional port State control co-operation regimes has been widelv 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 SIRENAC (Paris MOU between 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).



<sup>\*</sup> 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).



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%

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 which provides from 2002. а better assessment of performance of flags during Under three-year rolling period. 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.

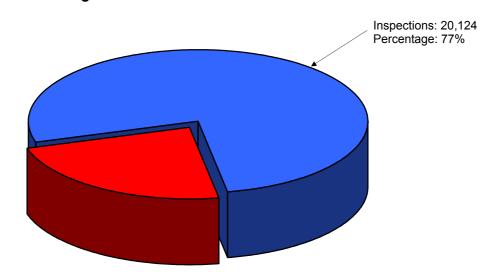
A total of 84,119 deficiencies were recorded in 2003. This represented a 12% increase of number of deficiencies found, compared with 75,210 deficiencies in 2002. The deficiencies found are categorized and shown in Figure 6 and Table 6.

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 deficiencies recorded. related were 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 seafarers (STCW) dropped for down significantly.

#### OVERVIEW OF PORT STATE CONTROL RESULTS 1994 – 2003

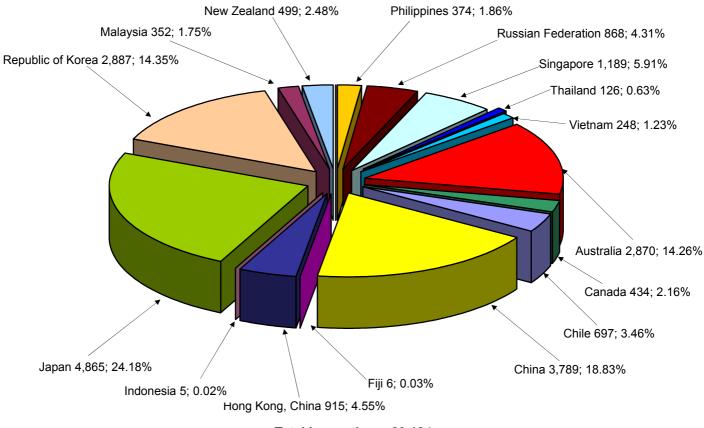
Figures 7-12 show the comparison of port State inspection results for 1994 - 2003. These figures indicate continuous improvements in the port State control activities in the region over the past nine years.





#### Figure 1: INSPECTION PERCENTAGE

Total individual ship visits: 26,142



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

Total inspections: 20,124

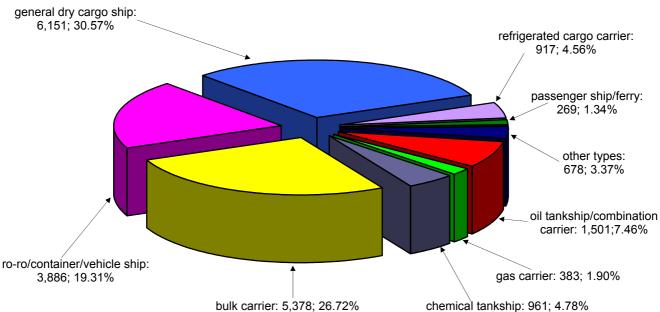


Figure 3: TYPE OF SHIP INSPECTED

bulk carrier: 5,378; 26.72%

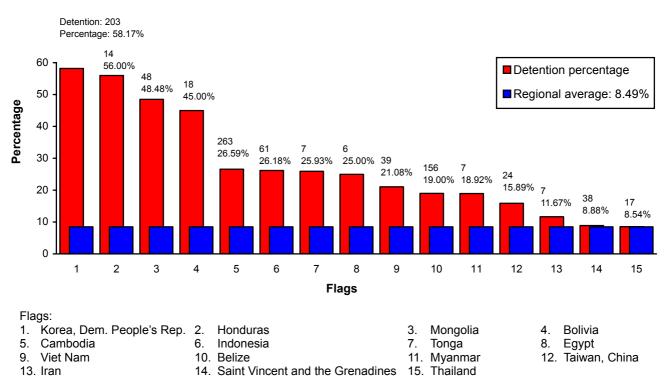
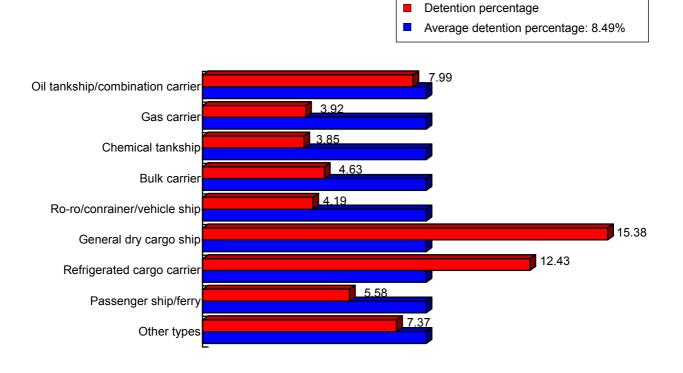


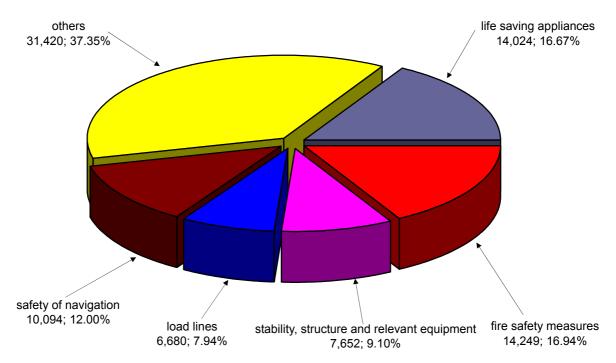
Figure 4: DETENTIONS PER FLAG

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





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

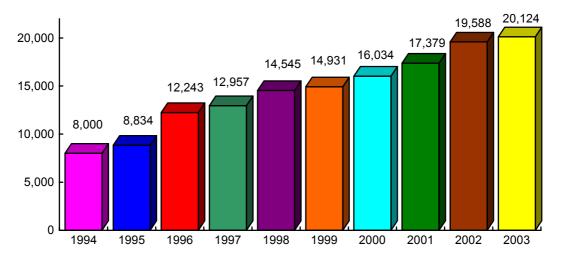
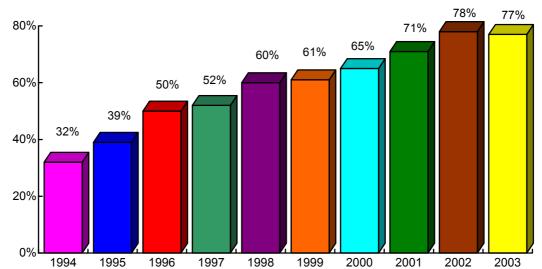
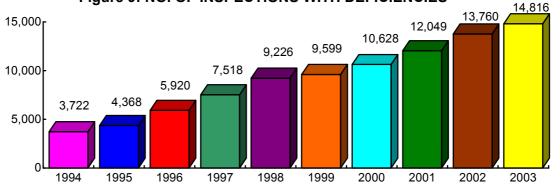


Figure 7: NO. OF INSPECTIONS









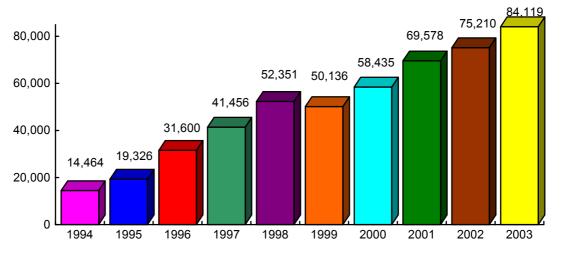


Figure 10: NO. OF DEFICIENCIES

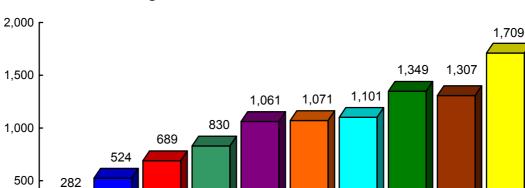
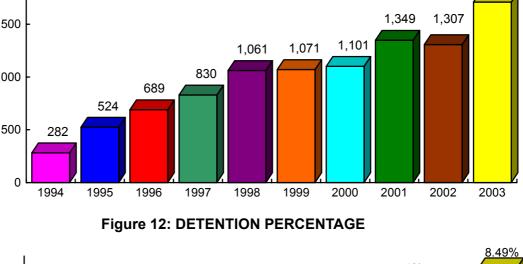
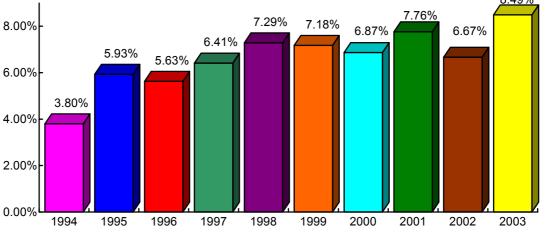


Figure 11: NO. OF DETENTIONS





## **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<br>69 | LOAD LINE<br>66 | LOAD LINE<br>PROT<br>88 | SOLAS<br>74 | SOLAS<br>PROT<br>78 | SOLAS<br>PROT<br>88 | MARPOL<br>73/78 | STCW<br>78 | COLREG<br>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 Dec | ember 2003) |
|-----------------------|----------------|------------|------------|---------------|-------------|
| Authority             | Annexes I & II | Annex III  | Annex IV   | Annex V       | Annex VI    |
| 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<br>inspections | No. of<br>inspections<br>with<br>deficiencies | No. of<br>deficiencies | No. of<br>detentions | No. of<br>individual<br>ships <sup>1)</sup> | Inspection<br>rate (%)     | Detention<br>percentage<br>(%) |
|----------------------------------|-----------------------|---|------------------------|----------------------|---|----------------------------|--------------------------------|
| 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                           |
| Total                            | 20,124                | 14,816  | 84,119                 | 1,709                | Regional<br>26,142                          | Regional<br>approx.<br>77% | Regional<br>8.49%              |

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).

|                     | No. of      | No. of       | No. of       | No. of     | Detention  |
|---------------------|-------------|--------------|--------------|------------|------------|
| Flag                | inspections | inspections  | deficiencies | detentions | percentage |
|                     |             | with         |              |            | %          |
|                     |             | deficiencies |              |            |            |
| 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          |

#### Table 3: PORT STATE INSPECTIONS PER FLAG

|  | No. of      | No. of       | No. of       | No. of     | Detention  |
|--|-------------|--------------|--------------|------------|------------|
| Flag                                   | inspections | inspections  | deficiencies | detentions | percentage |
|  |             | with         |              |            | %          |
|  |             | deficiencies |              |            |            |
| 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<br>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               | 4           | 3            | 34           | 1          | 25.00      |
| Republic                               |             | _            | _            |            |            |
| 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                  | 428         | 381          | 2,406        | 38         | 8.88       |
| Grenadines                             |             |              |              |            |            |
| 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<br>inspections<br>with<br>deficiencies | No. of<br>deficiencies | No. of<br>detentions | Detention<br>percentage<br>% |
|----------------------------|--------------------|---|------------------------|----------------------|------------------------------|
| 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                         |
| Тодо                       | 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                        |
| Total                      | 20,124             | 14,816  | 84,119                 | 1,709                | Regional<br>8.49             |

|                                  | No. of      | No. of       | No. of       | No. of     | Detention |
|----------------------------------|-------------|--------------|--------------|------------|-----------|
| Type of ship                     | inspections |              | deficiencies | detentions |           |
|                                  |             | with         |              |            | %         |
|                                  |             | deficiencies |              |            |           |
| 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     |
| Total                            | 20,124      | 14,816       | 84,119       | 1,709      | 8.49      |

#### Table 4: PORT STATE INSPECTIONS PER SHIP TYPE

| Recognized organization (RO)           | Total No. of<br>inspections | Total No. of<br>detentions | No. of RO<br>related<br>detentions | Detention<br>percentage% | RO related<br>detention<br>percentage% | Percentage of<br>RO related<br>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   | 14                          | 5                          | 2                                  | 35.71                    | 14.29                                  | 40.00                                      |
| Inspection Bureau                      |                             |                            |                                    |                          |  |  |
| 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 5: PORT STATE INSPECTIONS PER RECOGNIZED ORGANIZATION

#### 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                 |
| Total  | 84,119              |

#### SUMMARY OF PORT STATE INSPECTION DATA 2001 – 2003

#### Table 7: BLACK – GREY – WHITE LISTS \*

| Flag                                | Inspections<br>2001-2003 | Detentions<br>2001-2003 | Black to Grey<br>Limit | Grey to White<br>Limit | Excess<br>Factor |  |  |  |  |  |
|-------------------------------------|--------------------------|-------------------------|------------------------|------------------------|------------------|--|--|--|--|--|
| BLACK LIST                          |                          |                         |                        |                        |                  |  |  |  |  |  |
| 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             |  |  |  |  |  |
|                                     | GI                       | REY LIST                |                        |                        |                  |  |  |  |  |  |
| 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                     |           |           | Black to Grey |       | Excess |
|--------------------------|-----------|-----------|---------------|-------|--------|
|                          | 2001-2003 | 2001-2003 | Limit         | Limit | 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   |
|                          | W         | HITE LIST |               |       |        |
| 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<sub>95%</sub>=1.645

q=3%

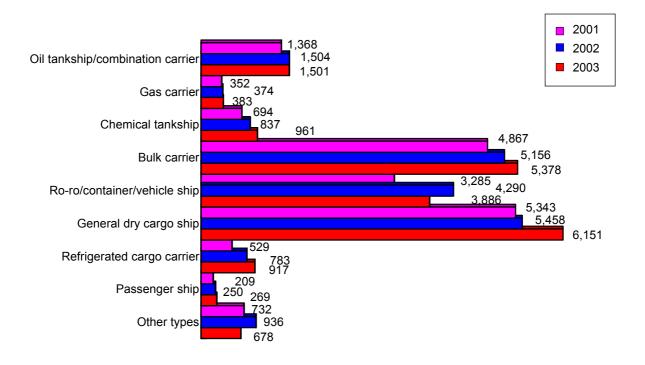
|                     | Nu   | mber of | inspectio | ons   | Nu   | 3-year |      |       |                                      |
|---------------------|------|---------|-----------|-------|------|--------|------|-------|--------------------------------------|
| Flag                | 2001 | 2002    | 2003      | Total | 2001 | 2002   | 2003 | Total | rolling<br>average<br>detention<br>% |
| 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                                 |

#### Table 8: INSPECTIONS AND DETENTIONS PER FLAG

|                                     | Nu   | mber of | inspectio | ons   | Νι   | 3-year |      |       |                                      |
|-------------------------------------|------|---------|-----------|-------|------|--------|------|-------|--------------------------------------|
| Flag                                | 2001 | 2002    | 2003      | Total | 2001 | 2002   | 2003 | Total | rolling<br>average<br>detention<br>% |
| 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                                |
| Могоссо                             | 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                                 |

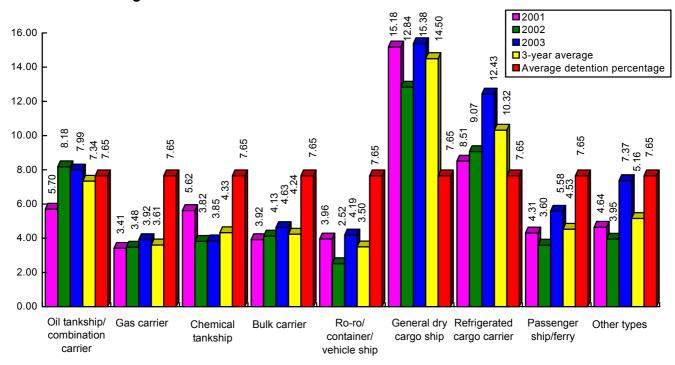
|                                  | Nu    | mber of | inspectio | ons    | Nu   | umber of | detentio | ns    | 3-year                               |
|----------------------------------|-------|---------|-----------|--------|------|----------|----------|-------|--------------------------------------|
| Flag                             | 2001  | 2002    | 2003      | Total  | 2001 | 2002     | 2003     | Total | rolling<br>average<br>detention<br>% |
| 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                                 |
| Тодо                             | 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                               |

|                            | Nu     | Number of inspections |        |        |       | Number of detentions |       |       |                                      |  |
|----------------------------|--------|-----------------------|--------|--------|-------|----------------------|-------|-------|--------------------------------------|--|
| Flag                       | 2001   | 2002                  | 2003   | Total  | 2001  | 2002                 | 2003  | Total | rolling<br>average<br>detention<br>% |  |
| 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                                |  |
| Total                      | 17,379 | 19,588                | 20,124 | 57,091 | 1,349 | 1,307                | 1,709 | 4,365 | 7.65                                 |  |



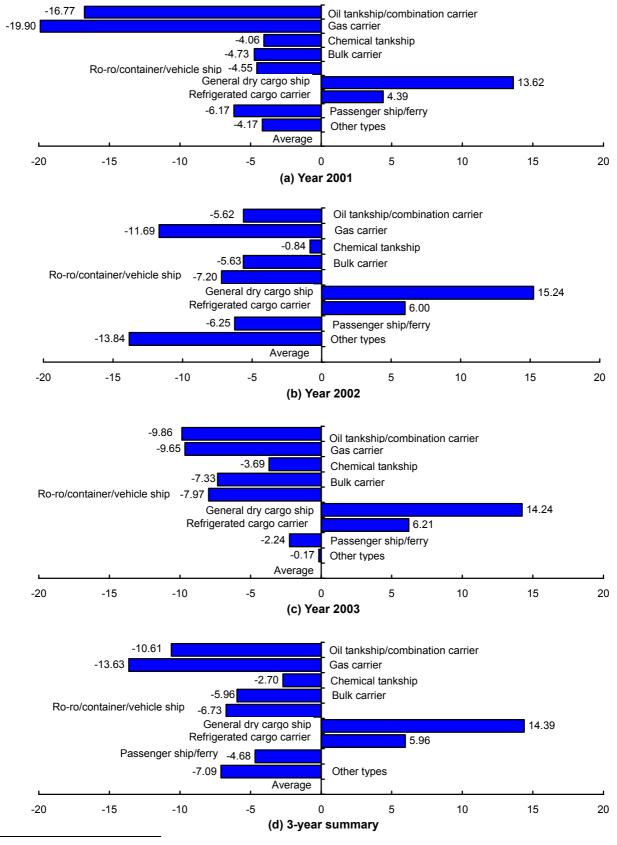
### Figure 13: COMPARISON OF INSPECTIONS PER SHIP TYPE

Figure 14: COMPARISON OF DETENTIONS PER SHIP TYPE



|                                  | Number of inspections |        |        |        | Number of detentions |       |       |       | Average                      |
|----------------------------------|-----------------------|--------|--------|--------|----------------------|-------|-------|-------|------------------------------|
| Type of ship                     | 2001                  | 2002   | 2003   | Total  | 2001                 | 2002  | 2003  | Total | detention<br>percentage<br>% |
| 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                        |
| Total                            | 17,379                | 19,588 | 20,124 | 57,091 | 1,349                | 1,307 | 1,709 | 4,365 | 7.65                         |

## Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE



### Figure 15: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

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

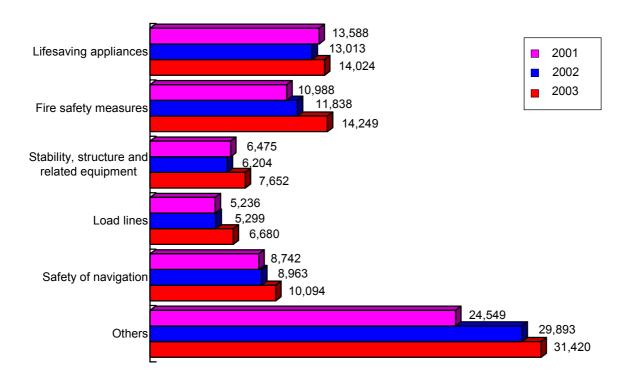
|                                  | Number of inspections |        |        | Number of inspections<br>with deficiencies |        |        |        | 3-year<br>average |                 |
|----------------------------------|-----------------------|--------|--------|--|--------|--------|--------|-------------------|-----------------|
| Type of ship                     | 2001                  | 2002   | 2003   | Total                                      | 2001   | 2002   | 2003   | Total             | percentage<br>% |
| 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           |
| Total                            | 17,379                | 19,588 | 20,124 | 57,091                                     | 12,049 | 13,760 | 14,816 | 40,625            | 71.16           |

## Table 10: INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

| Recognized organization (RO)                    | Total No. of<br>inspections<br>2002-2003 | Total No. of<br>detentions<br>2002-2003 | No. of RO<br>related<br>detentions<br>2002-2003 | 2-year avergae<br>detention<br>percentage% | 2-year average<br>RO related<br>detention<br>percentage% | 2-year average<br>percentage of<br>RO related<br>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 | 87                                       | 14                                      | 8   | 16.09                                      | 9.20   | 57.14  |
| Bureau  |  |   |   |  |  |  |
| 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

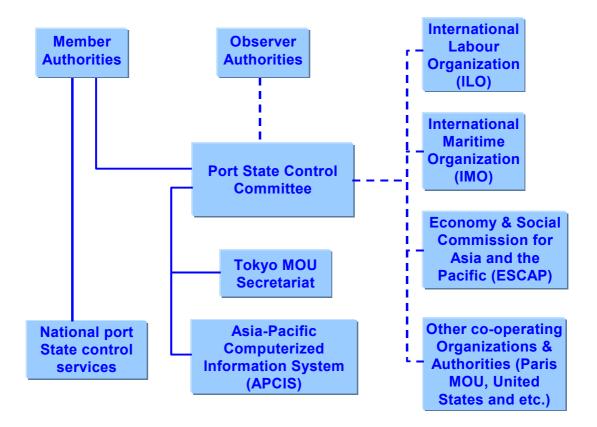


|  | Number of deficiencies |        |        |  |  |  |
|--|------------------------|--------|--------|--|--|--|
| Nature of deficiency                         | 2001                   | 2002   | 2003   |  |  |  |
|  |                        |        |        |  |  |  |
| Ship's certificates and documents            | 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    |  |  |  |
| Total  | 69,578                 | 75,210 | 84,119 |  |  |  |

# Table 12: COMPARISON OF DEFICIENCIES BY CATEGORIES

**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:

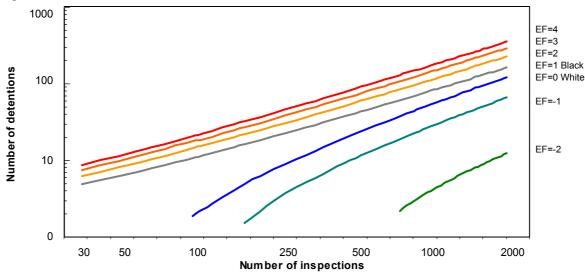
$$u_{black - to - grey} = N \cdot p + 0.5 + z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$
$$u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$$

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':

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

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

 $u_{excess factor} = 48$ 

#### 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:

 $u_{\text{white - to - grey}} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$  $u_{\text{white - to - grey}} = 2,203 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{2,203 \cdot 0.07 \cdot 0.93}$ 

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

To determine the excess factor the following formula is used:

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

 $u_{white - to - grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1 - p)}$  $u_{white - to - grey} = 424 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{424 \cdot 0.07 \cdot 0.93}$  $u_{white-to-grey} = 21$ 

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':

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

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

 $u_{excess factor} = 16$ 

# 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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