#### **ANNUAL REPORT**

## ON PORT STATE CONTROL IN THE ASIA-PACIFIC REGION

2007



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Further information may be obtained from:

The Tokyo MOU Secretariat
Ascend Shimbashi 8F
6-19-19 Shimbashi

This Report is also available at Tokyo MOU web-site

(http://www.tokyo-mou.org) on Internet.

Minato-ku, Tokyo Japan 105-0004

Tel: +81-3-3433-0621 Fax: +81-3-3433-0624

#### **FOREWORD**

We are pleased to present the Annual Report on Port State Control in the Asia-Pacific Region 2007.

Tokyo MOU continues to develop and enhance port State control activities in the region. Member Authorities of the Tokyo MOU once again rewrite the record of the previous year with the total number of inspections 22,039 in 2007. For verifying whether safety management system has been effectively established and properly maintained on board ships after five years of implementation, Tokyo MOU, together with the Paris MOU and other MOUs, conducted a concentrated inspection campaign (CIC) on the ISM Code in the fall of 2007.

This annual report provides introduction of the port State control developments and activities of the Tokyo MOU in 2007. Moreover, the report also incorporates port State control statistics and analysis which summarizes the results of inspections carried out by member Authorities during the year.

Continuous enforcement of port State control has received positive effect in improving quality of shipping in the region. However, some substandard ships still persist to attempt to trade in the region. To this end, Tokyo MOU will take more concerted measures and invest more resources to further enhance and improve port State control activities in order to achieve the ultimate objective of elimination of substandard ships.

Vitaly Klyuev
Chairman
Port State Control Committee

Mitsutoyo Okada Secretary Tokyo MOU Secretariat

#### **CONTENTS**

	page
OVERVIEW	
General introduction	1
Review of year 2007	2
The Port State Control Committee	3
The Asia-Pacific Computerized Information System (APCIS)	4
Training and seminars for port State control officers	5
Co-operation with other regional port State control agreements	7
PORT STATE CONTROL UNDER THE TOKYO MOU, 2007	
Inspections	9
Detentions	9
Deficiencies	10
Overview of port State control results 1997-2007	11
ANNEX 1 STATUS OF THE RELEVANT INSTRUMENTS	17
ANNEX 2 PORT STATE INSPECTION STATISTICS	19
Statistics for 2007	19
Summary of port State inspection data 2005-2007	28
ANNEX 3 ORGANIZATION STRUCTURE OF THE TOKYO MOU	44
Explanatory Note on the Black-Grey-White Lists	45

#### **LIST OF FIGURES AND TABLES**

		page
Figure 1	Inspection percentage	12
Figure 2	Port State inspections - contribution by Authorities	12
Figure 3	Type of ship inspected	13
Figure 4	Detentions per flag	13
Figure 5	Detention per ship type	14
Figure 6	Deficiencies by main categories	14
Figure 7	No. of inspections	15
Figure 8	Inspection percentage	15
Figure 9	No. of inspections with deficiencies	15
Figure 10	No. of deficiencies	16
Figure 11	No. of detentions	16
Figure 12	Detention percentage	16
Figure 13	Comparison of inspections per ship type	34
Figure 14	Comparison of detentions per ship type	34
Figure 15	Comparison of inspections with deficiencies per ship type	36
Figure 16	Comparison of number of deficiencies by main categories	42
Table 1	Status of the relevant instruments	17
Table 1a	Status of MARPOL 73/78	18
Table 2	Port State inspections carried out by Authorities	19
Table 2a	Port State inspections on maritime security	20
Table 3	Port State inspections per flag	21
Table 4	Port State inspections per ship type	24
Table 5	Port State inspections per recognized organization	25
Table 6	Deficiencies by categories	27
Table 7	Black – Grey – White Lists	28
Table 8	Inspections and detentions per flag	30
Table 9	Inspections and detentions per ship type	35
Table 10	Inspections with deficiencies per ship type	37
Table 11	Inspections and detentions per recognized organization	38
Table 12	Performance of recognized organization	40
Table 13	Comparison of deficiencies by categories	43

#### 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 thirteenth issue and covers port State control activities and developments in the year 2007.

The Memorandum was concluded in Tokyo on 1 December 1993. The following maritime Authorities in the Asia-Pacific region are the signatories to the Memorandum: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Solomon Singapore, 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 members. Currently, the Memorandum has 18 full members, namely: Australia, Canada, Chile, China, Fiji, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation. Singapore, Thailand, Vanuatu and Vietnam.

The main objective of the Memorandum is to establish an effective port State control regime in the Asia-Pacific region through co-operation of its members and harmonization of their activities, to eliminate substandard shipping so as to promote maritime safety, to protect the marine environment and to safeguard working and living conditions on board ships.

The Port State Control Committee established under the Memorandum monitors and controls the implementation and on-going operation of the Memorandum. The Committee consists of representatives of the member Authorities and also observers from the maritime Authorities and the inter-governmental organizations which have been granted observer status by the Committee, namely: Democratic People's Republic of Korea, Macao (China), Solomon Islands, United States Coast Guard, the International Maritime Organization (IMO), the International Labour Organization (ILO), the Paris MOU, the Viña del Mar Agreement, the Indian Ocean MOU and the Black Sea MOU. The Secretariat of the Memorandum is located in Tokyo, Japan.

For the purpose of the Memorandum, the following instruments are the basis for port State control activities in the region:

- the International Convention on Load Lines, 1966;
- the Protocol of 1988 relating to the

International Convention on Load Lines, 1966, as amended;

- the International Convention for the Safety of Life at Sea, 1974, as amended;
- the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974;
- the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974;
- the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating thereto, as amended;
- the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers, 1978, as amended;
- the Convention on the International Regulations for Preventing Collisions at Sea, 1972;
- the International Convention on Tonnage Measurement of Ships, 1969; and
- the Merchant Shipping (Minimum Standards) Convention, 1976 (ILO Convention No. 147).

#### **REVIEW OF YEAR 2007**

Tokyo MOU endeavoured to improve and enhance its development and activities continuously so as to attain and maintain decent status and high performance as an active PSC regime.

For the purpose of long term development and achievement, Tokyo MOU has intended to pay more attention to strategic issues. As a step forward, the meeting structure of the Port State Control Committee has been improved by the establishment of the new Technical Working Group (TWG). Continuous consideration will be given to the strategic issues in order to identify clearer strategy and to have a better view of the future.

Taking the chance of full implementation of the ISM Code for five years, Tokyo MOU carried out a concentrated inspection campaign (CIC) on the ISM Code from 1 September to 30 November 2007. This was the third time the Tokyo MOU had conducted the CIC to focus on the ISM Code compliance. The previous CICs were conducted in 1998 and 2002 respectively, which were mainly to verify whether safety management system was established on board ships, while campaign was aimed at determining whether safety management system effectively implemented and properly maintained on board ships. During the CIC period, member Authorities inspected a total of 4,094 ships, among which 108 were detained due to major ISM non-compliances. The detention rate of the CIC was about 2.6%. The overall regional detention rate during the campaign period was 5.0%. The most frequent ISM non-compliances recorded were relating to effective maintenance system, review of the safety management system and reporting of non-conformities, accidents and dangerous occurrences. This CIC was conducted in conjunction with the Paris MOU and other regional PSC regimes as well.

Tokyo MOU provides comprehensive and

transparent information on its PSC development and activities to the shipping industry and the general public via the web-site (http://www.tokyo-mou.org) internet. Now, the Tokyo MOU web-site has more and more users who visit the site to access to the up-to-date PSC information frequently. improvement of publication of detention information, an on-line detention list was launched on 1 January 2007. The on-line detention list is generated on the real time basis so that there is no more delay for publication of detention details.



The seventeenth Committee meeting, Hong Kong, September 2007.

#### THE PORT STATE CONTROL COMMITTEE

The seventeenth meeting of the Port State Control Committee was held in Hong Kong, China, from 3 to 6 September 2007. The meeting was hosted by the Hong Kong Marine Department. The meeting was conducted under the chairmanship of Mr. Park Young-sun, Deputy Director-General, Ministry of Maritime Affairs and Fisheries of Republic of Korea.

The seventeenth meeting in Hong Kong was attended by representatives of the member Authorities of Australia, Canada, Chile, China, Hong Kong (China), Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, the Philippines, the Russian Federation, Singapore, Thailand and Viet Nam, and observers from DPR Korea, Macao (China), Solomon Islands, the United States Coast Guard, IMO, and the Secretariats of Black Sea MOU, Indian Ocean MOU and the Viña del Mar Agreement.

The Committee adopted a set of amendments to the Memorandum for providing clearer and higher qualitative criteria for membership. The amendments will take effect in May 2008. The Committee also adopted a guidance document concerning application, assessment and acceptance of Co-operating Member Authority.

The Committee noted that the joint CIC on the ISM Code with the Paris MOU had started. The Committee was informed of the progress made regarding preparations for the CIC on safety of navigation (SOLAS Chapter V) which is provisionally scheduled to be conducted during the period September – November 2008 together with the Paris MOU. The Committee thanked the Paris MOU for accepting the proposal to run a joint CIC on lifeboats in 2009. For preparing the CIC on lifeboats, the Committee established an intersessional group with the task to develop the CIC questionnaire and related guidance in collaboration with the Paris MOU.

The Committee decided to include in the Annual Report an additional table showing

levels of performance of recognized organizations (RO) as the Paris MOU did. The Committee considered the matter on provision of PSC data to the global integrated shipping information system (GISIS) which was requested by IMO. The Committee expressed the general support for the provision of Tokyo MOU PSC data to GISIS. The Committee agreed to further discuss with IMO on terms of the agreement to be signed and the technical details for that purpose.

The Committee decided to replace the meeting of Regional Database Managers (DBM) with the meeting of a newly established Technical Working Group (TWG), aiming to facilitate the decision making process of the Committee and to make more effective use of the limited meeting time. The new Technical Working Group will not only take care of matters that had been dealt with by the DBM but also be entitled to consider substantial or policy issues entrusted by the Committee.

Moreover, the Committee also made discussions and decisions on the following:

- list of follow-up actions emanating from the second Joint Ministerial Conference;
- amendments to the guidelines for the detention review panel;
- outcome of work done by the intersessional groups on coding system and statistics; and
- consideration of strategic issues for long term improvement.

As the term of office of the Chairman, Mr. Park Young-sun of Republic of Korea, expired at the end of the meeting, the Committee

elected unanimously Dr. Vitaly Klyuev, Acting Deputy Director of the Department of State Policy for Maritime and River Transport, Ministry of Transport of the Russian Federation, as the new Chairman for its next three sessions. The Committee expressed sincere appreciation to Mr. Park for his good work done as the Chairman.

The eighteenth meeting of the Port State Control Committee will take place in Indonesia in August 2008.

#### 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), was established. The computer center of the APCIS was relocated to Moscow in 2007, under the auspices of the Ministry of Transport of the Russian Federation.

On 31 August 2007, the sixteenth DBM meeting was held in Hong Kong, China. The meeting took place just prior to the seventeenth meeting of the Committee. The DBM16 meeting was chaired by Mr. Christopher Lindesay, Principal System Officer, Australian Maritime Safety Authority.

The major issues discussed at the DBM16 meeting include:

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

(IG-BP), intersessional group on statistics (IG-Statistics) and working group on coding system (WG-Codes);

- amendments to the codes for recognized organizations (RO);
- detailed statistics on PSC and improvements made; and
- information exchange with other regional PSC databases.

The outcome of discussions on the above mentioned matters and the related recommendations by the DBM meeting were duly reported to the Committee meeting for final decision.

During the past years, the DBM meeting had valuable work and made contribution to the development, establishment and operation of the APCIS system and information exchange in the region. For the purpose of further the DBM improvement, meeting. as mentioned earlier, will be replaced by the TWG meeting from 2008.

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

For the purpose of attaining higher degree of proficiency of PSC officers and promoting harmonization of PSC activities in the region, Tokyo MOU makes continuous efforts to organize various technical co-operation programmes. The technical co-operation



Training course for PSC officers

programmes that are being now implemented include basic training course, fellowship training, seminar and PSC officers exchange.

The seventeenth basic training course for PSC officers was held in Yokohama, Japan, from 2 to 20 July 2007. This was the third joint training course organized by IMO and the Tokyo MOU. Eleven PSC officers from each of the Authorities of Chile, China, Indonesia, Republic of Korea, Macao (China), Malaysia, Papua New Guinea, the Philippines, the Russian Federation, Thailand and Viet Nam and six participants invited by IMO from Abuja MOU, the Viña del Mar Agreement, Caribbean MOU, Indian Ocean MOU, Mediterranean MOU and Riyadh MOU attended this training course. The Shipbuilding Research Center of Japan (SRC) assisted in implementation of the training course.

The basic training course that is designated for junior or newly recruited PSC officers was developed in line with the IMO Model Course 3.09 on Port State Control. During the training



On-the-job training

period, a wide range of lectures and presentations relating to port State control provisions, convention requirements and regulations, PSC inspection procedures and reporting were provided. Experts from SRC, Nippon Kaiji Kyokai (ClassNK), Ministry of Land, Infrastructure, Transport and Tourism of Japan (MLIT) and the Secretariat delivered

lectures on the relevant subjects. Supplementing the classroom lectures, onboard training was conducted twice. In addition, trainees also had a chance to visit a liferaft manufacturer.

By the kind invitation of the Directorate General of the Maritime Territory and Merchant Marine (DIRECTEMAR) of Chile, the fifteenth seminar for PSC officers was held on 18 - 20 April 2007 in Viña del Mar, Chile. Participants from

**Authorities** of Australia, Canada, Chile, China, Fiji, Indonesia, Japan, Democratic People's Republic of Korea, Republic of Korea, Macao (China), the Philippines, the Russian Federation, the Solomon Islands, Thailand, United States Coast Guard, Vanuatu and Viet Nam attended the seminar.

The main topic assigned to the seminar was the ISM Code for the purpose of preparation and facilitation of the CIC on ISM in the year. During the seminar, speakers

invited from Australian Maritime Safety Authority (AMSA), the United States Coast Guard (USCG) and the American Bureau of Shipping (ABS) made presentations covering CIC on ISM, practice on ISM enforcement in the US and implementation of ISM from class/RO perspective. For information of participants, introductions on recent



The fifteenth seminar for PSC officers



Fellowship training for PSC officers

development and activities of the Tokyo MOU and PSC in Chile were also provided. Moreover, two case study sessions were organized, during which a number of practical cases were discussed.

Fellowship training was developed to provide practical training for middle level PSC officers. Now fellowship trainings are conducted in various locations in the region. One PSC officer from Fiji received training in Brisbane, Australia, from 19 to 30 March 2007. Two PSC officers, one each from Indonesia and Viet Nam attended the fellowship training from 17 to 27 April 2007 in Pusan, Republic of Korea. Four PSC officers, one each from the Philippines, the Russian Federation, Thailand and Viet Nam participated in the fellowship training conducted in China during the period of 18 - 28 September 2007 in Dalian and Shanghai respectively. The fellowship training in Japan was held from 2 to 16 November 2007. Nine PSC officers from the Authorities of Chile, China, Republic of Korea, Malaysia, the Philippines, the Russian Federation, Thailand and Vanuatu participated in the

fellowship training in Japan. During the fellowship training in Japan, participants were given onboard training at five regional PSC offices with the guidance by the experienced PSC officers from the host Authority.

The **PSC** officers exchange programme is for the promotion of harmonization of PSC procedures. Under the PSC officers exchange scheme, an Authority can send its PSC officer to and receive PSC officer from another Authority. Currently, the **PSC** officers exchange programme is

implemented among Authorities of Australia, Canada, China, Hong Kong (China), Japan, Republic of Korea, New Zealand and Singapore. In 2007, three PSC officer exchanges were completed, i.e. one PSC officer from Republic of Korea to Hong Kong (China), one from Canada to Republic of Korea and another one from Republic of Korea to Australia.

The Tokyo MOU technical co-operation programmes have been implemented effectively with full support rendered by Authorities and the fund generously given by the Nippon Foundation.

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

Establishment and effective operation of regional co-operation regimes on port State control has formed a worldwide network for elimination of substandard shipping. Currently, there are a total of nine regional port State control agreements (MOUs) which have covered the major part of the world, namely:

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

As inter-regional collaboration on port State control, Tokyo MOU holds observer status of the Paris MOU, the Caribbean MOU and the Indian Ocean MOU. On the other hand, Tokyo MOU has granted observer status to the Paris MOU, the Indian Ocean MOU, the Viña del Mar Agreement and the Black Sea MOU.

The Global Integrated Shipping Information System (GISIS) was launched by IMO in 2005. Now, the IMO Secretariat is pursuing further development of GISIS, including a module on PSC which will be finalized in near future. The establishment of GISIS PSC module will be based on data exchange between IMO and information centers of PSC regimes. For that purpose, IMO is inviting all the MOUs to conclude agreement with it for provision of PSC data to GISIS. Recognizing that, with establishment of the GISIS PSC module, IMO would be able to collect global port State inspection data/reports from PSC regimes efficiently and effectively and such would make IMO in a better position to assist and promote PSC activities world-wide, the Port State Control Committee of the Tokyo MOU expressed the general support for provision of PSC data to GISIS.

Tokyo MOU has established and maintained effective and close co-operation with the Paris MOU both in the administrative and the

technical levels. Representatives of the two Secretariats present at Port State Control Committee meetings of each other on a regular basis. During year 2007, continuous efforts and further co-ordinated actions by the two Memoranda were made relating to:

- preparation of and carrying out the CIC on ISM Code jointly;
- collaboration on arrangement for future CICs;
- continuous submission of annual list of flags targeted by the Paris MOU, Tokyo MOU and the United States Coast Guard to IMO;
- review of PSC coding system for further improvement and harmonization; and
- development of PSC guidelines for implementation of the 2006 maritime labour convention.

Tokyo MOU receives a standing invitation from the Paris MOU for PSC seminars. One PSC officer from the Authority of Malaysia attended the forty-fourth PSC seminar of the Paris MOU in June 2007.

#### PORT STATE CONTROL UNDER THE TOKYO MOU, 2007

#### **INSPECTIONS**

In 2007, 22,039 inspections, involving 12,337 individual ships, were carried out on ships registered under 98 flags. The inspections increased by 353 in number and about 1.6% in percentage, comparing with the figures in 2006. Figure 2 and Table 2 show the number of inspections carried out by the member Authorities of the Tokyo MOU. Out of 22,039 inspections, there were 14,864 inspections found ships with deficiencies. Since the total number of individual ships operating in the region was estimated at 18,721\*, the inspection rate in the region was approximately 66%\*\* in 2007 (see Figure 1).

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

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



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

\*\* New method for calculation of inspection rate (number of



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 2007, 1,239 ships registered under 58 flags were detained because of serious deficiencies found onboard. The detention rate of ships inspected was 5.62%. This was a small

<sup>\*\*</sup> New method for calculation of inspection rate (number of individual ships inspected/number of individual ships visited%) was introduced from 2004.



increase compared with 2006 (5.5%).

Figure 4 shows the detention rate by flag that had at least 20 port State inspections and whose detention rate was above the average regional rate. Figure 5 gives the detention rate by ship type.

Black-grey-white list (Table 7) has been introduced since 2002, providing a better assessment of performance of flags during three-year rolling period. The black-grey-white list for 2005-2007 consists of 60 flags, whose ships were involved in 30 or more inspections during the period. There are 13 flags in the black list. Kiribati and Sierra Leone take the positions as the first and the third worst flags respectively although it is their first time to be shown in the list. With its effort to improve its



performance, Comoros changes position from black list into grey list. The grey list still has 17 flags. It is remarkable that the number of flags appearing in the white list continues to be increasing. This year, the white list comprises 30 flags that maintain good performance at the high level.

#### **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 83,950 deficiencies were recorded in 2007. 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 2007, 11,313 life-saving appliances related deficiencies and 13.641 fire safety measures related deficiencies were recorded. representing 30% of the total number of deficiencies.

As a consequence of the CIC on the ISM Code during the year, the highest number of ISM related deficiencies was observed in 2007. There were a total of 4,211 ISM related deficiencies recorded, which was 1,381 (33%) higher than the figure of 2,830 in 2006.

#### OVERVIEW OF PORT STATE CONTROL RESULTS 1997 – 2007

Figures 7-12 show the comparison of port State inspection results for 1997 - 2007. These figures indicate continuous improvements in the port State control activities in the region over the past nine years.

Total ships inspected: 12,337 Percentage: 66%

Figure 1: INSPECTION PERCENTAGE

Total individual ship visited: 18,721

Papua New Guinea 30; 0.14% Russian Federation 1,132; 5.14% New Zealand 511; 2.32% Philippines 957; 4.34% Singapore 946; 4.29% Malaysia 441; 2.00% Thailand 139; 0.63% Republic of Korea 3,022; 13.71% Vanuatu 5; 0.02% Viet Nam 582; 2.64% Australia 2,963; 13.44% Canada 396; 1.80% Chile 687; 3.12% Japan 5,217; 23.67% China 4,151; 18.84% Fiji 4; 0.02% Indonesia 188; 0.85% Hong Kong, China 668; 3.03%

Figure 2: PORT STATE INSPECTIONS - CONTRIBUTION BY AUTHORITIES

Total inspections: 22,039

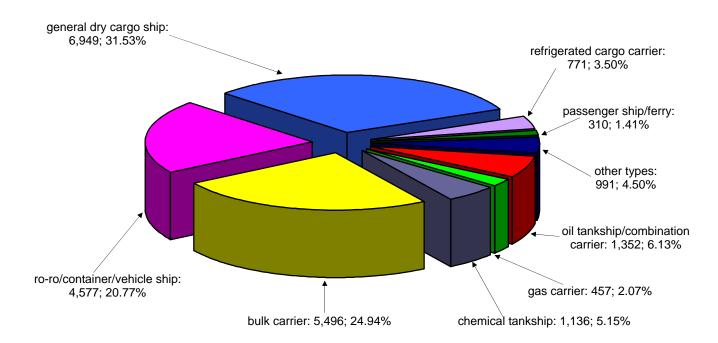
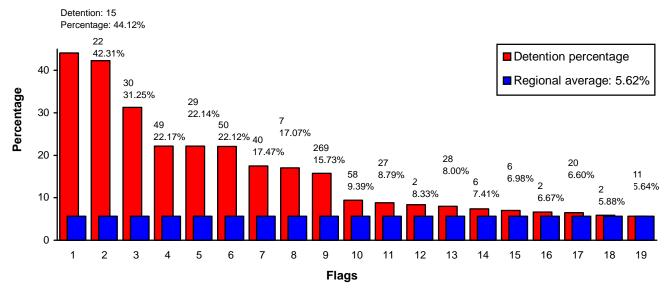


Figure 3: TYPE OF SHIP INSPECTED





#### Flags:

- 1. Kiribati
- 5. Korea, Dem. People's Rep.
- 9. Cambodia
- 13. Viet Nam
- 17. Saint Vincent and the Grenadines
- 2. Sierra Leone
- 6. Mongolia
- 10. Belize14. Taiwan, China
- 18. Myanmar
- 3. Georgia
- 7. Indonesia
- Thailand
- 15. Italy 19. Malaysia
- 4. Tuvalu
- 8. Dominica
- 12. Belgium
- 16. Gibraltar (UK)

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

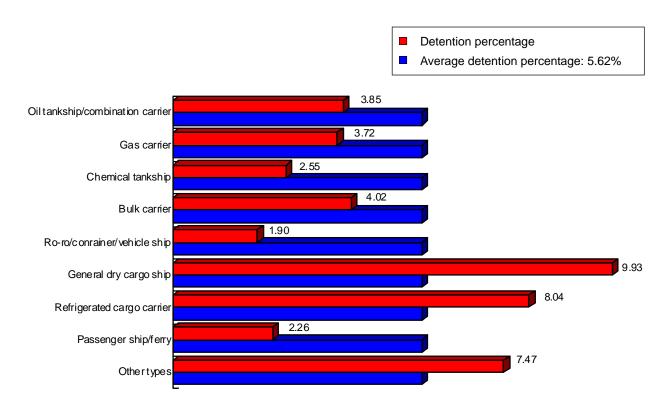
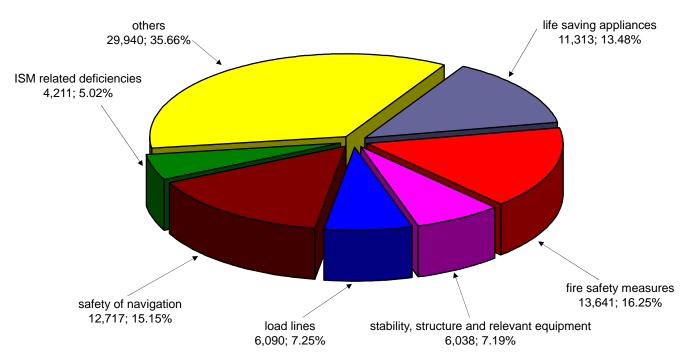


Figure 5: DETENTION PER SHIP TYPE





#### **OVERVIEW OF PORT STATE CONTROL RESULTS 1997 - 2007**

Figure 7: NO. OF INSPECTIONS

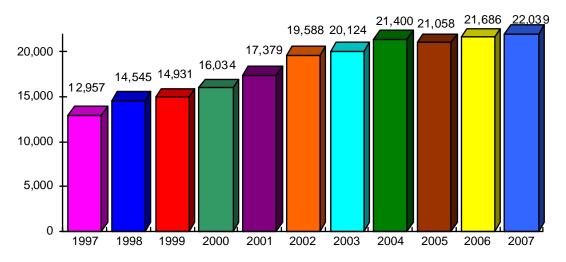
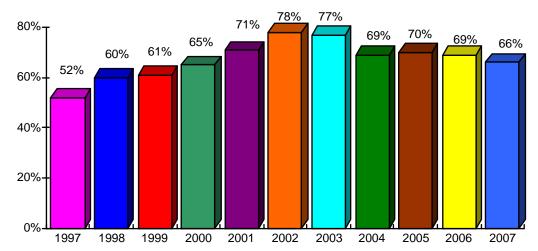


Figure 8: INSPECTION PERCENTAGE\*



\* Method for calculation of inspection rate was changed from 2004. See also the footnote in page 9.

Figure 9: NO. OF INSPECTIONS WITH DEFICIENCIES

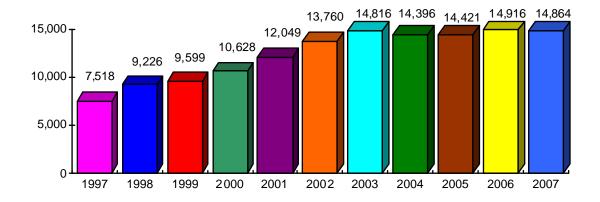


Figure 10: NO. OF DEFICIENCIES

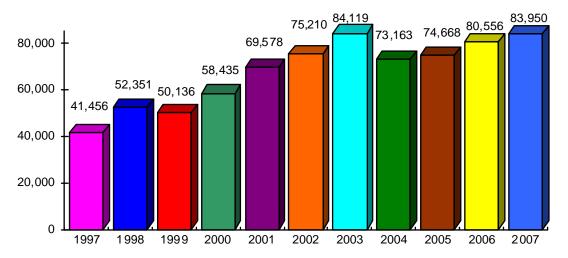


Figure 11: NO. OF DETENTIONS

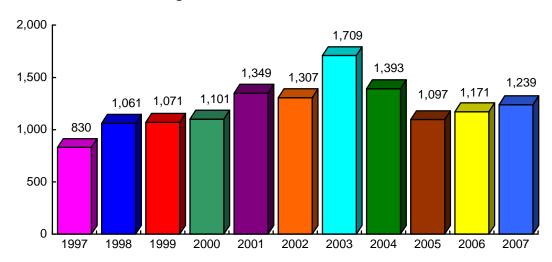
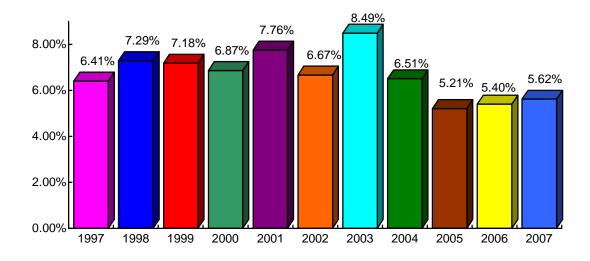


Figure 12: DETENTION PERCENTAGE



### **ANNEX 1**

# STATUS OF THE RELEVANT INSTRUMENTS

Table 1: STATUS OF THE RELEVANT INSTRUMENTS

(Date of deposit of instruments)

(Ac of 24 Docombor 2007)

								(As a	t 31 Decer	(As at 31 December 2007)
Authority	TONNAGE 69	LOAD LINE 66	LOAD LINE PROT 88	SOLAS 74	SOLAS PROT 78	SOLAS PROT 88	MARPOL 73/78	STCW 78	COLREG 72	ILO 147**
Australia	21/05/82	29/07/68	07/02/97	17/08/83	17/08/83	07/02/97	14/10/87	07/11/83	29/02/80	ı
Canada	18/07/94	14/01/70		08/02/78			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	28/90/60	02/08/77	
China	08/04/80	05/10/73	03/02/95	07/01/80	17/12/82	03/02/95	01/07/83	08/06/81	07/01/80	
Fiji	29/11/72	29/11/72	28/07/04	04/03/83	28/07/04	28/07/04	•	27/03/91	04/03/83	
Hong Kong, China*	18/07/82	16/08/72	23/10/02	25/05/80	14/11/81	23/10/02	11/04/85	03/11/84	15/07/77	28/11/80
Indonesia	14/03/89	17/01/77		17/02/81	23/08/88		21/10/86	27/01/87	13/11/79	ı
Japan	17/07/80	15/05/68	24/06/97	15/05/80	15/05/80	24/06/97	68/90/60	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	ı
Malaysia	24/04/84	12/01/71		19/10/83	19/10/83		31/01/97	31/01/92	23/12/80	ı
New Zealand	06/01/78	05/02/70	03/06/01	23/02/90	23/02/90	03/06/01	25/09/98	30/02/86	26/11/76	ı
Papua New Guinea	25/10/93	18/05/76		12/11/80			25/10/93	28/10/91	18/05/76	ı
Philippines	82/60/90	04/03/69		15/12/81			15/06/01	22/02/84		ı
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	1
Thailand	11/06/96	30/12/92		18/12/84			02/11/07	19/06/97	62/80/90	
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	28/01/82	ı
Viet Nam	18/12/90	18/12/90	27/05/02	18/12/90	12/10/92	27/05/02	29/05/91	18/12/90	18/12/90	
DPR Korea	18/10/89	18/10/89	08/08/01	01/05/85	01/05/85	08/08/01	01/05/85	01/05/85	01/05/85	
Macao, China	18/07/05	18/07/05	1	20/12/99	20/12/99	24/06/05	20/12/99	18/07/05	20/12/99	
Solomon Islands	30/06/04	30/06/04	•	30/06/04		1	30/06/04	01/06/94	12/03/82	1
Entry into force date	18/07/1982	21/07/1968	03/05/2000	25/05/1980	25/05/1980 01/05/1981	03/02/2000 02/10/1983 28/04/1984 15/07/1977	02/10/1983	28/04/1984	15/07/1977	28/11/1981

Effective date of extension of instruments.

Although some Authorities have not ratified the ILO Convention No.147, parts of the ILO conventions referred to therein are implemented under their national legislation and port State control is carried out on matters covered by the national regulations.

Table 1a: STATUS OF MARPOL 73/78

(Date of deposit of instruments)

(As at 31 December 2007)

				<u> </u>	
Authority	Annexes I & II	Annex III	Annex IV	Annex V	Annex VI
Australia	14/10/87	10/10/94	27/02/04	14/08/90	07/08/07
Canada	16/11/92	08/08/02	-	-	-
Chile	10/10/94	10/10/94	10/10/94	-	16/10/06
China	01/07/83	13/09/94	02/11/06	21/11/88	23/05/06
Fiji	-	-	-	-	-
Hong Kong, China*	11/04/85	07/03/95	02/11/06	27/03/96	-
Indonesia	21/10/86	-	-	-	-
Japan	09/06/83	09/06/83	09/06/83	09/06/83	15/02/05
Republic of Korea	23/07/84	28/02/96	28/11/03	28/02/96	20/04/06
Malaysia	31/01/97	-	-	31/01/97	-
New Zealand	25/09/98	25/09/98	-	25/09/98	-
Papua New Guinea	25/10/93	25/10/93	25/10/93	25/10/93	-
Philippines	15/06/01	15/06/01	15/06/01	15/06/01	-
Russian Federation	03/11/83	14/08/87	14/08/87	14/08/87	-
Singapore	01/11/90	02/03/94	01/05/05	27/05/99	08/10/00
Thailand	02/11/07	-	-	-	-
Vanuatu	13/04/89	22/04/91	15/03/04	22/04/91	15/03/04
Viet Nam	29/05/91	-	-	-	-
DPR Korea	01/05/01	01/05/01	01/05/01	01/05/01	-
Macao, China	20/12/99	20/12/99	02/11/06	20/12/99	23/05/06
Solomon Islands	30/06/04	30/06/04	30/06/04	30/06/04	-
Entry into force date	02/10/1983	01/07/1992	27/09/2003	31/12/1988	19/05/2005

<sup>\*</sup> Effective date of extension of instruments.

#### **ANNEX 2**

#### PORT STATE INSPECTION STATISTICS

#### **STATISTICS FOR 2007**

Table 2: PORT STATE INSPECTIONS CARRIED OUT BY AUTHORITIES

Authority	No. of individual ships inspected	No. of inspections	No. of follow-up inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions 1)	No. of individual ships visited <sup>2)</sup>	Inspection rate (%)	Detention percentage (%)
Australia <sup>4)</sup>	2,500	2,963	483	1,595	7,281	159	3,766	66.38	5.36
Canada <sup>5)</sup>	380	396	0	199	848	16	1,446	26.28	4.04
Chile	579	687	149	379	985	22	1,489	38.89	3.20
China	3,089	4,151	1,314	3,752	29,546	464	10,435	29.60	11.18
Fiji	3	4	0	0	0	0	126	2.38	0
Hong Kong, China	664	668	44	566	2,862	19	4,258	15.59	2.84
Indonesia	179	188	0	20	52	1	4,404	4.06	0.53
Japan	3,717	5,217	987	3,550	18,833	241	7,271	51.12	4.62
Republic of Korea	2,406	3,022	683	1,713	6,978	122	7,194	33.44	4.04
Malaysia	409	441	64	242	1,267	57	4,436	9.22	12.93
New Zealand	398	511	279	274	795	5	742	53.64	0.98
Papua New Guinea	30	30	17	19	87	0	336	8.93	0
Philippines	772	957	201	428	1,745	0	1,862	41.46	0
Russian Federation <sup>5)</sup>	661	1,132	1,182	947	6,841	48	825	80.12	4.24
Singapore	761	946	465	650	2,874	39	9,894	7.69	4.12
Thailand	131	139	26	62	153	8	2,577	5.08	5.76
Vanuatu	5	5	1	2	2	0	33	15.15	0
Viet Nam	498	582	166	466	2,801	38	1,494	33.33	6.53
Total	12,337	22,039	6,061	14,864	83,950	1,239	Regional 18,721	Regional 66%	Regional 5.62%

- Number of detentions does not include security related detentions.
- LMIU data for 2007.
- 1) 2) 3) 4) 5) Method for calculation of inspection rate was changed from 2004. See also the footnote in page 9.
- Data for Western Australia is also provided to Indian Ocean MOU.
- Data are only for the Pacific ports.

Table 2a: PORT STATE INSPECTIONS ON MARITME SECURITY

Authority	No. of inspections	No. of inspections with security related deficiencies	No. of secuirty related deficiencies	No. of security related detentions	Detention percentage (%)
Australia	2,963	10	10	0	0
Canada	396	2	2	0	0
Chile	687	8	10	1	0.15
China	4,151	347	384	14	0.34
Fiji	4	0	0	0	0
Hong Kong, China	668	21	23	0	0
Indonesia	188	0	0	0	0
Japan	5,217	389	478	1	0.02
Republic of Korea	3,022	240	272	12	0.40
Malaysia	441	51	62	14	3.17
New Zealand	511	2	2	0	0
Papua New Guinea	30	1	1	0	0
Philippines	957	12	13	0	0
Russian Federation	1,132	79	88	1	0.09
Singapore	946	162	166	2	0.21
Thailand	139	7	7	5	3.60
Vanuatu	5	0	0	0	0
Vietnam	582	14	14	2	0.34
Total	22,039	1,345	1,532	52	Regional 0.24%

Note: Security related data showing in the table are <u>excluded</u> from all other statistical tables and figures in this report.

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

_	No. of	No. of	No. of	No. of	Detention
Flag	inspections	inspections with	deficiencies	detentions	percentage
		deficiencies			%
Antigua and Barbuda	331	202	777	9	2.72
Argentina	2	2	4	0	0
Australia	8	3	7	0	0
Austria	3	1	2	0	0
Bahamas	621	333	1,347	14	2.25
Bahrain	2	2	2	0	0
Bangladesh	2	1	12	0	0
Barbados	12	9	35	1	8.33
Belgium	24	9	24	2	8.33
Belize	618	595	4,287	58	9.39
Bermuda (UK)	42	18	45	0	0
Bolivia	4	4	43	1	25.00
Brazil	6	6	19	0	0
Brunei Darussalam	3	2	15	0	0
Bulgaria	2	1	2	0	0
Cambodia	1,710	1,616	13,882	269	15.73
Cayman Islands (UK)	65	28	156	3	4.62
Chile	1	0	0	0	0
China	798	513	2,271	7	0.88
Colombia	1	1	14	0	0
Comoros	9	9	89	0	0
Cook Islands	11	9	27	0	0
Croatia	22	16	87	1	4.55
Cyprus	477	278	1,281	15	3.14
Denmark	104	53	238	0	0
Dominica	41	36	237	7	17.07
Egypt	10	10	108	1	10.00
Ethiopia	7	5	40	0	0
Fiji	1	1	6	0	0
Finland	2	0	0	0	0
France	38	16	40	0	0
Georgia	96	92	1,012	30	31.25
Germany	201	112	337	2	1.00
Gibraltar (UK)	30	17	41	2	6.67
Greece	216	109	346	5	2.31
Honduras	12	11	93	7	58.33
Hong Kong, China	1,302	736	3,213	16	1.23
India	95	58	313	2	2.11
Indonesia	229	216	1,953	40	17.47

	No. of	No. of	No. of	No. of	Detention
Flag	inspections	inspections	deficiencies	detentions	percentage
		with			%
		deficiencies			
Iran	37	29	163	1	2.70
Isle of Man (UK)	108	48	192	1	0.93
Israel	21	16	76	1	4.76
Italy	86	58	324	6	6.98
Jamaica	2	2	13	0	0
Japan	111	66	266	2	1.80
Jordan	1	1	4	0	0
Kiribati	34	33	440	15	44.12
Korea, Democratic People's Republic	131	127	1,250	29	22.14
Korea, Republic of	1,063	817	4,376	17	1.60
Kuwait	9	5	17	0	0
Lebanon	1	1	1	0	0
Liberia	1,257	703	2,798	28	2.23
Lithuania	1	1	3	0	0
Luxemburg	6	4	16	0	0
Malaysia	195	122	657	11	5.64
Maldives	6	5	20	0	0
Malta	422	279	1,341	21	4.98
Marshall Islands	507	264	1,022	11	2.17
Mexico	1	1	5	0	0
Mongolia	226	203	1,641	50	22.12
Morocco	1	0	0	0	0
Myanmar	34	22	127	2	5.88
Netherlands	134	72	259	5	3.73
Netherlands Antilles	31	20	72	1	3.23
New Zealand	5	0	0	0	0
Norway	234	117	411	3	1.28
Pakistan	12	8	40	0	0
Panama	6,930	4,433	23,109	328	4.73
Papua New Guinea	15	15	88	1	6.67
Philippines	195	116	458	6	3.08
Portugal	2	2	5	0	0
Qatar	6	3	7	0	0
Russian Federation	371	292	1,281	17	4.58
Saint Vincent and the Grenadines	303	272	1,756	20	6.60
Samoa	2	2	15	1	50.00
Saudi Arabia	6	5	18	0	0
Seychelles	3	3	31	1	33.33
Sierra Leone	52	52	624	22	42.31
Singapore	931	512	2,181	23	2.47

Flag	No. of inspections	No. of inspections with deficiencies	No. of deficiencies	No. of detentions	Detention percentage %
Slovakia	8	7	38	2	25.00
South Africa	2	1	2	0	0
Spain	2	0	0	0	0
St. Kitts & Nevis (UK)	15	15	186	4	26.67
Sweden	25	12	37	0	0
Switzerland	16	10	56	0	0
Taiwan, China	81	46	226	6	7.41
Tanzania	1	1	2	0	0
Thailand	307	226	1,603	27	8.79
Tonga	15	12	54	1	6.67
Trinidad and Tobago	1	0	0	0	0
Turkey	35	22	121	1	2.86
Tuvalu	221	200	1,676	49	22.17
Ukraine	9	8	40	2	22.22
United Arab Emirates (UAE)	4	3	22	0	0
United Kingdom (UK)	183	83	277	2	1.09
United States of America	46	28	113	0	0
Vanuatu	64	42	179	2	3.13
Viet Nam	350	284	1,795	28	8.00
Ship's registration withdrawn	4	3	11	0	0
Total	22,039	14,864	83,950	1,239	Regional 5.62

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

	No. of	No. of	No. of	No. of	Detention
Type of ship	inspections	with	deficiencies	detentions	
		deficiencies			%
NI O . I			101		4.07
NLS tanker	60	31	124	11	1.67
Combination carrier	44	31	179	1	2.27
Oil tanker	1,248	687	3,638	50	4.01
Gas carrier	457	232	1,035	17	3.72
Chemical tanker	1,136	689	3,166	29	2.55
Bulk carrier	5,496	3,370	17,161	221	4.02
Vehicle carrier	729	312	1,057	17	2.33
Container ship	3,582	2,030	7,819	58	1.62
Ro-Ro cargo ship	266	196	918	12	4.51
General cargo/multi-purpose ship	6,949	5,781	41,046	690	9.93
Refrigerated cargo carrier	771	605	3,474	62	8.04
Woodchip carrier	217	96	237	3	1.38
Livestock carrier	41	30	166	4	9.76
Ro-Ro Passenger ship	76	65	340	1	1.32
Passenger ship	234	148	681	6	2.56
Factory ship	1	0	0	0	0
Heavy load carrier	52	36	155	3	5.77
Offshore service vessel	94	70	346	4	4.26
MODU & FPSO	7	5	30	0	0
High speed passenger craft	46	41	247	0	0
Special purpose ship	62	45	236	5	8.06
High speed cargo craft	2	2	19	1	50.00
Tugboat	225	195	1,015	40	17.78
Others	244	167	861	14	5.74
Total	22,039	14,864	83,950	1,239	5.62

Table 5: PORT STATE INSPECTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Alfa Register of Shipping	4	0	0	0	0	0
American Bureau of Shipping	1,686	42	2	2.49	0.12	4.76
Belize Maritime Bureau Inc.	256	24	5	9.38	1.95	20.83
Belize Register Corporation	3	0	0	0	0	0
Biro Klasifikasi Indonesia	123	29	3	23.58	2.44	10.34
Bureau Securitas	2	0	0	0	0	0
Bureau Veritas	1,653	58	6	3.51	0.36	10.34
China Classification Society	2,136	41	1	1.92	0.05	2.44
China Corporation Register of Shipping	384	43	6	11.20	1.56	13.95
Compania Nacional de Registro e Inspeccion de Naves	6	5	2	83.33	33.33	40.00
Croatian Register of Shipping	28	1	0	3.57	0	0
Cyprus Bureau of Shipping	4	0	0	0	0	0
Det Norske Veritas	2,335	63	8	2.70	0.34	12.70
Fidenavis SA	7	0	0	0	0	0
Germanischer Lloyd	2,019	55	6	2.72	0.30	10.91
Global Marine Bureau	1,154	195	24	16.90	2.08	12.31
Hellenic Register of Shipping	35	4	0	11.43	0	0
Honduras Bureau of Shipping	3	1	0	33.33	0	0
Honduras International Surveying and Inspection Bureau	4	2	1	50.00	25.00	50.00
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	239	43	9	17.99	3.77	20.93
Indian Register of Shipping	98	3	1	3.06	1.02	33.33
Intermaritime Certification Services, S.A.	16	4	0	25.00	0	0
International Merchant Marine Registry of Belize	32	6	1	18.75	3.13	16.67
International Naval Surveys Bureau	36	6	0	16.67	0	0
International Register of Shipping	253	31	2	12.25	0.79	6.45
International Ship Classification	400	95	25	23.75	6.25	26.32
Isthmus Bureau of Shipping	604	73	11	12.09	1.82	15.07
Korea Classification Society (former Joson Classification Society)	140	28	8	20.00	5.71	28.57
Korea Ship Safety Technology Authority	3	1	1	33.33	33.33	100.00
Korean Register of Shipping	1,905	54	5	2.83	0.26	9.26
Lloyd's Register	2,454	76	5	3.10	0.20	6.58
Marconi International Marine Company Ltd.	1	0	0	0	0	0

Recognized organization (RO)	No. of overall inspections	No. of overall detentions	No. of RO responsible detentions	Detention percentage%	RO responsible detention percentage%	Percentage of RO responsible detentions%
Maritime Technical Systems and	107	17	5	15.89	4.67	29.41
Services Mangalia Ship Pagistry	21	6	3	28.57	14.29	50.00
Mongolia Ship Registry National Cargo Bureau Inc.	<u>∠                                </u>	0	0	<u> </u>	14.29	0 50.00
National Shipping Adjusters Inc	<u> </u>	0	0	0	0	0
Nippon Kaiji Kyokai	6,860	191	18	2.78	0.26	9.42
NV Unitas	1	0	0	0	0.20	9.42
Overseas Marine Certification Services		13	0	17.11	0	0
Panama Bureau of Shipping		4	1	5.06	1.27	25.00
Panama Maritime Documentation	203	27	2	13.30	0.99	7.41
Services	200	21		10.00	0.55	7.41
Panama Maritime Surveyors Bureau Inc	174	32	2	18.39	1.15	6.25
Panama Register Corporation	119	10	0	8.40	0	0
Panama Shipping Certificate Inc.	5	0	0	0	0	0
Panama Shipping Registrar Inc.	154	33	4	21.43	2.60	12.12
Polski Rejestr Statkow	28	2	0	7.14	0	0
Register of Shipping (DPR Korea)	4	1	0	25.00	0	0
Registro Internacional Naval S.A.	17	0	0	0	0	0
Registro Italiano Navale	259	17	2	6.56	0.77	11.76
RINAVE Portuguesa	3	0	0	0	0	0
Russian Maritime Register of Shipping	707	43	1	6.08	0.14	2.33
Russian River Register	2	0	0	0	0	0
Shipping Register of Ukraine	1	0	0	0	0	0
Turkish Lloyd	5	1	1	20.00	20.00	100.00
Union Bureau of Shipping	583	107	23	18.35	3.95	21.50
Universal Maritime Bureau	261	31	10	11.88	3.83	32.26
Universal Shipping Bureau	8	1	0	12.50	0	0
Viet Nam Register of Shipping	370	39	10	10.54	2.70	25.64
Other	535	79	16	14.77	2.99	20.25

Note: The number of overall inspections and detentions is calculated corresponding to each recognized organization (RO) that issued statutory certificate(s) for a ship. In case that ship's certificates were issued by more than one ROs, the inspection and detention would be counted to each of them.

**Table 6: DEFICIENCIES BY CATEGORIES** 

Nature of deficiencies	No. of deficiencies
Ship's certificates and documents	2,892
Stability, structure and related equipment	6,038
Propulsion and auxiliary machinery	4,428
Alarm signals	418
Fire safety measures	13,641
Oil, chemical tankers and gas carriers	264
Lifesaving appliances	11,313
Radiocommunications	3,213
Safety of navigation	12,717
Carriage of cargo and dangerous goods	575
ISM related deficiencies	4,211
SOLAS related operational deficiencies	3,805
Additional measures to enhance maritime safety	969
Bulk carriers-additional safety measures	311
Load lines	6,090
MARPOL-Annex I	5,657
MARPOL-Annex II	98
MARPOL-Annex III	21
MARPOL-Annex IV	118
MARPOL-Annex V	1,825
MARPOL-Annex VI	373
MARPOL related operational deficiencies	442
Certification and watchkeeping for seafarers	2,175
Crew and accommodation (ILO 147)	319
Food and catering (ILO 147)	137
Working spaces (ILO 147)	581
Accident prevention (ILO 147)	586
Mooring arrangements (ILO 147)	653
Other deficiencies	80
Total	83,950

#### **SUMMARY OF PORT STATE INSPECTION DATA 2005 – 2007**

Table 7: BLACK - GREY - WHITE LISTS \*

Flag	Inspections 2005-2007	Detentions 2005-2007	Black to Grey Limit	Grey to White Limit	Excess Factor					
BLACK LIST										
Kiribati	37 15 6									
Georgia	183	54	19		6.68					
Sierra Leone	75	24	9		6.44					
Indonesia	643	130	56		4.56					
Mongolia	538	108	48		4.43					
Korea, Democratic People's Republic	752	135	65		3.90					
Cambodia	4,190	653	321		3.56					
Tuvalu	555	89	49		3.19					
Viet Nam	988	124	83		2.29					
Belize	1,969	208	157		1.82					
Dominica	101	13	12		1.32					
Taiwan, China	294	30	28		1.17					
Thailand	962	84	81		1.10					
	Gl	REY LIST								
Comoros	30	4	5	0	0.84					
Myanmar	107	9	12	3	0.66					
Turkey	166	13	18	6	0.62					
Egypt	42	3	6	0	0.51					
Malaysia	714	50	62	38	0.50					
Papua New Guinea	48	3	7	0	0.45					
Pakistan	34	2	5	0	0.44					
Saint Vincent and the Grenadines	1,037	67	87	59	0.30					
Tonga	48	2	7	0	0.30					
Belgium	79	3	10	1	0.20					
Gibraltar (UK)	79	3	10	1	0.20					
Cayman Islands (UK)	198	10	20	7	0.20					
Israel	81	3	10	1	0.19					
Italy	254	13	25	11	0.17					
Croatia	67	2	9	1	0.16					
India	283	14	27	12	0.12					
Netherlands Antilles	114	4	13	3	0.10					
WHITE LIST										
Australia	31	0		0	0					
Kuwait	37	0		0	0					
Iran	175	5		6	-0.30					

	Inspections	Detentions	Black to Grey	Grev to White	Excess
Flag	2005-2007	2005-2007	Limit	Limit	Factor
Sweden	83	1		1	-0.30
Switzerland	59	0		0	-0.40
Malta	1,302	56		75	-0.55
Cyprus	1,600	70		95	-0.56
Isle of Man (UK)	391	13		19	-0.57
Philippines	621	22		33	-0.65
Bermuda (UK)	135	2		4	-0.71
Panama	20,023	904		1,342	-0.75
Antigua and Barbuda	979	34		55	-0.79
Russian Federation	1,329	45		77	-0.89
Netherlands	399	10		19	-0.90
Greece	821	25		45	-0.91
Vanuatu	222	4		9	-0.92
France	134	1		4	-1.06
Bahamas	1,935	58		116	-1.09
Norway	696	16		37	-1.17
Marshall Islands	1,365	34		80	-1.23
Liberia	3,501	95		220	-1.27
Germany	636	11		33	-1.39
Singapore	2,620	60		161	-1.39
Japan	378	4		18	-1.53
United States of America	161	0		5	-1.66
United Kingdom (UK)	540	5		28	-1.69
Korea, Republic of	3,023	39		188	-1.78
Hong Kong, China	3,711	49		234	-1.78
Denmark	318	1		14	-1.82
China	2,453	20		150	-1.94

Note: 1) Flags listed above are those of ships which were involved in 30 or more port State inspections over the 3-year period.

2) According to the decision by the Port State Control Committee, flags involving 30-49 port State inspections with nil detentions are listed on top of the White List.

p=7%

 $z_{95\%}$ =1.645

q=3%

<sup>\*</sup> See explanatory note on page 45.

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

	Number of inspections				Number of detentions				3-year
Flag	2005	2006	2007	Total	2005	2006	2007	Total	rolling average detention %
Algeria	3	0	0	3	0	0	0	0	0
Antigua and Barbuda	301	347	331	979	12	13	9	34	3.47
Argentina	0	0	2	2	0	0	0	0	0
Australia	12	11	8	31	0	0	0	0	0
Austria	6	3	3	12	0	1	0	1	8.33
Bahamas	641	673	621	1,935	28	16	14	58	3.00
Bahrain	1	3	2	6	0	0	0	0	0
Bangladesh	9	7	2	18	2	1	0	3	16.67
Barbados	8	9	12	29	1	0	1	2	6.90
Belgium	29	26	24	79	1	0	2	3	3.80
Belize	687	664	618	1,969	74	76	58	208	10.56
Bermuda (UK)	44	49	42	135	2	0	0	2	1.48
Bolivia	5	5	4	14	0	1	1	2	14.29
Brazil	2	0	6	8	0	0	0	0	0
Brunei Darussalam	2	3	3	8	0	0	0	0	0
Bulgaria	2	4	2	8	0	0	0	0	0
Cambodia	1,148	1,332	1,710	4,190	169	215	269	653	15.58
Canada	3	0	0	3	0	0	0	0	0
Cayman Islands (UK)	53	80	65	198	1	6	3	10	5.05
Chile	3	3	1	7	0	0	0	0	0
China	851	804	798	2,453	7	6	7	20	0.82
Colombia	1	0	1	2	0	0	0	0	0
Comoros	7	14	9	30	0	4	0	4	13.33
Cook Islands	0	2	11	13	0	0	0	0	0
Croatia	23	22	22	67	1	0	1	2	2.99
Cyprus	575	548	477	1,600	21	34	15	70	4.38
Denmark	95	119	104	318	1	0	0	1	0.31
Dominica	16	44	41	101	3	3	7	13	12.87
Dominican Republic	1	0	0	1	0	0	0	0	0
Ecuador	1	0	0	1	0	0	0	0	0
Egypt	13	19	10	42	1	1	1	3	7.14
Equatorial Guinea	1	0	0	1	0	0	0	0	0
Ethiopia	5	3	7	15	0	0	0	0	0
Fiji	0	1	1	2	0	1	0	1	50.00
Finland	0	0	2	2	0	0	0	0	0

Flag	Number of inspections				Number of detentions				3-year
	2005	2006	2007	Total	2005	2006	2007	Total	rolling average detention %
France	47	49	38	134	1	0	0	1	0.75
Georgia	23	64	96	183	3	21	30	54	29.51
Germany	206	229	201	636	1	8	2	11	1.73
Gibraltar (UK)	25	24	30	79	1	0	2	3	3.80
Greece	314	291	216	821	3	17	5	25	3.05
Honduras	12	5	12	29	4	3	7	14	48.28
Hong Kong, China	1,196	1,213	1,302	3,711	21	12	16	49	1.32
India	85	103	95	283	6	6	2	14	4.95
Indonesia	218	196	229	643	47	43	40	130	20.22
Iran	80	58	37	175	3	1	1	5	2.86
Ireland	2	0	0	2	0	0	0	0	0
Isle of Man (UK)	135	148	108	391	8	4	1	13	3.32
Israel	35	25	21	81	0	2	1	3	3.70
Italy	75	93	86	254	4	3	6	13	5.12
Jamaica	2	2	2	6	1	0	0	1	16.67
Japan	141	126	111	378	0	2	2	4	1.06
Jordan	3	2	1	6	1	1	0	2	33.33
Kiribati	0	3	34	37	0	0	15	15	40.54
Korea, Democratic People's Republic	322	299	131	752	65	41	29	135	17.95
Korea, Republic of	953	1,007	1,063	3,023	5	17	17	39	1.29
Kuwait	16	12	9	37	0	0	0	0	0
Latvia	1	1	0	2	0	0	0	0	0
Lebanon	0	1	1	2	0	0	0	0	0
Liberia	1,073	1,171	1,257	3,501	32	35	28	95	2.71
Lithuania	1	1	1	3	0	0	0	0	0
Luxemburg	3	12	6	21	0	0	0	0	0
Malaysia	279	240	195	714	21	18	11	50	7.00
Maldives	11	11	6	28	1	2	0	3	10.71
Malta	421	459	422	1,302	14	21	21	56	4.30
Marshall Islands	368	490	507	1,365	10	13	11	34	2.49
Mauritius	0	2	0	2	0	0	0	0	0
Mexico	0	0	1	1	0	0	0	0	0
Mongolia	150	162	226	538	34	24	50	108	20.07
Morocco	1	0	1	2	0	0	0	0	0
Myanmar	37	36	34	107	4	3	2	9	8.41
Netherlands	143	122	134	399	4	1	5	10	2.51

	Nu	mber of	inspectio	ons	Nu	ımber of	detentio	ns	3-year
Flag	2005	2006	2007	Total	2005	2006	2007	Total	rolling average detention %
Netherlands Antilles	41	42	31	114	2	1	1	4	3.51
New Zealand	4	5	5	14	0	0	0	0	0
Norway	247	215	234	696	7	6	3	16	2.30
Pakistan	9	13	12	34	1	1	0	2	5.88
Panama	6,484	6,609	6,930	20,023	274	302	328	904	4.51
Papua New Guinea	15	18	15	48	1	1	1	3	6.25
Philippines	219	207	195	621	5	11	6	22	3.54
Poland	0	1	0	1	0	0	0	0	0
Portugal	2	6	2	10	0	0	0	0	0
Qatar	9	3	6	18	0	0	0	0	0
Romania	0	1	0	1	0	0	0	0	0
Russian Federation	508	450	371	1,329	17	11	17	45	3.39
Saint Vincent and the Grenadines	398	336	303	1,037	25	22	20	67	6.46
Samoa	2	3	2	7	1	0	1	2	28.57
Saudi Arabia	12	5	6	23	0	0	0	0	0
Seychelles	1	1	3	5	0	0	1	1	20.00
Sierra Leone	1	22	52	75	0	2	22	24	32.00
Singapore	806	883	931	2,620	20	17	23	60	2.29
Slovakia	0	4	8	12	0	2	2	4	33.33
Solomon Islands	1	0	0	1	0	0	0	0	0
South Africa	0	0	2	2	0	0	0	0	0
Spain	3	4	2	9	0	0	0	0	0
Sri Lanka	5	1	0	6	1	1	0	2	33.33
St. Kitts & Nevis (UK)	2	6	15	23	0	2	4	6	26.09
Sweden	28	30	25	83	0	1	0	1	1.20
Switzerland	25	18	16	59	0	0	0	0	0
Taiwan, China	116	97	81	294	15	9	6	30	10.20
Tanzania	1	2	1	4	0	0	0	0	0
Thailand	339	316	307	962	27	30	27	84	8.73
Tonga	19	14	15	48	1	0	1	2	4.17
Trinidad and Tobago	0	0	1	1	0	0	0	0	0
Tunisia	1	2	0	3	0	0	0	0	0
Turkey	72	59	35	166	5	7	1	13	7.83
Tuvalu	142	192	221	555	16	24	49	89	16.04
Ukraine	3	4	9	16	0	0	2	2	12.50
United Arab Emirates (UAE)	3	7	4	14	0	2	0	2	14.29

	Nu	Number of inspections				Number of detentions				
Flag	2005	2006	2007	Total	2005	2006	2007	Total	rolling average detention %	
United Kingdom (UK)	172	185	183	540	2	1	2	5	0.93	
United States of America	53	62	46	161	0	0	0	0	0	
Vanuatu	80	78	64	222	2	0	2	4	1.80	
Viet Nam	307	331	350	988	56	40	28	124	12.55	
Yemen	1	0	0	1	0	0	0	0	0	
Ship's registration withdrawn	1	2	4	7	1	2	0	3	42.86	
Total	21,058	21,686	22,039	64,783	1,097	1,171	1,239	3,507	5.41	

Figure 13: COMPARISON OF INSPECTIONS PER SHIP TYPE

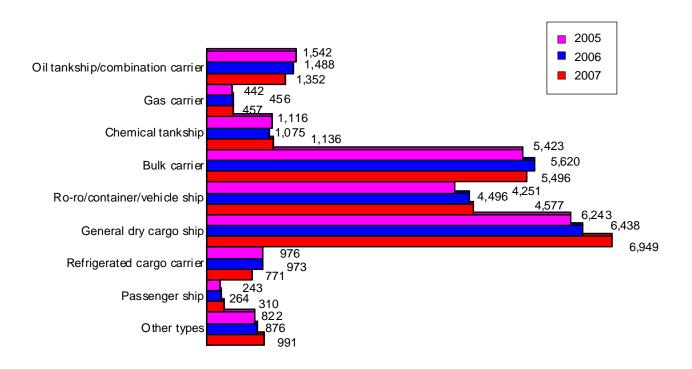


Figure 14: COMPARISON OF DETENTIONS PER SHIP TYPE

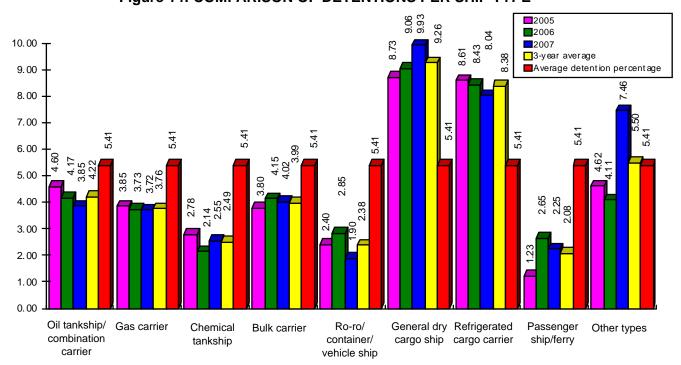


Table 9: INSPECTIONS AND DETENTIONS PER SHIP TYPE

	Number of inspections			ns	N	umber of	detention	ıs	Average
Type of ship	2005	2006	2007	Total	2005	2006	2007	Total	detention percentage %
NLS tanker	36	43	60	139	0	3	1	4	2.88
Combination carrier	74	53	44	171	0	0	1	1	0.58
Oil tanker	1,432	1,392	1,248	4,072	71	59	50	180	4.42
Gas carrier	442	456	457	1,355	17	17	17	51	3.76
Chemical tanker	1,116	1,075	1,136	3,327	31	23	29	83	2.49
Bulk carrier	5,423	5,620	5,496	16,539	206	233	221	660	3.99
Vehicle carrier	650	658	729	2,037	9	17	17	43	2.11
Container ship	3,373	3,598	3,582	10,553	88	100	58	246	2.33
Ro-Ro cargo ship	228	240	266	734	5	11	12	28	3.81
General cargo/multi-purpose ship	6,243	6,438	6,949	19,630	545	583	690	1,818	9.26
Refrigerated cargo carrier	976	973	771	2,720	84	82	62	228	8.38
Woodchip carrier	220	224	217	661	3	4	3	10	1.51
Livestock carrier	50	43	41	134	0	2	4	6	4.48
Ro-Ro passenger ship	47	70	76	193	0	3	1	4	2.07
Passenger ship	196	194	234	624	3	4	6	13	2.08
Factory ship	0	0	1	1	0	0	0	0	0
Heavy load carrier	43	54	52	149	2	1	3	6	4.03
Offshore service vessel	97	78	94	269	3	1	4	8	2.97
MODU & FPSO	8	7	7	22	0	0	0	0	0
High speed passenger craft	32	39	46	117	0	0	0	0	0
Special purpose ship	46	39	62	147	0	1	5	6	4.08
High speed cargo craft	0	1	2	3	0	0	1	1	33.33
Tugboat	144	179	225	548	8	10	40	58	10.58
Others	182	212	244	638	22	17	14	53	8.31
Total	21,058	21,686	22,039	64,783	1,097	1,171	1,239	3,507	5.41

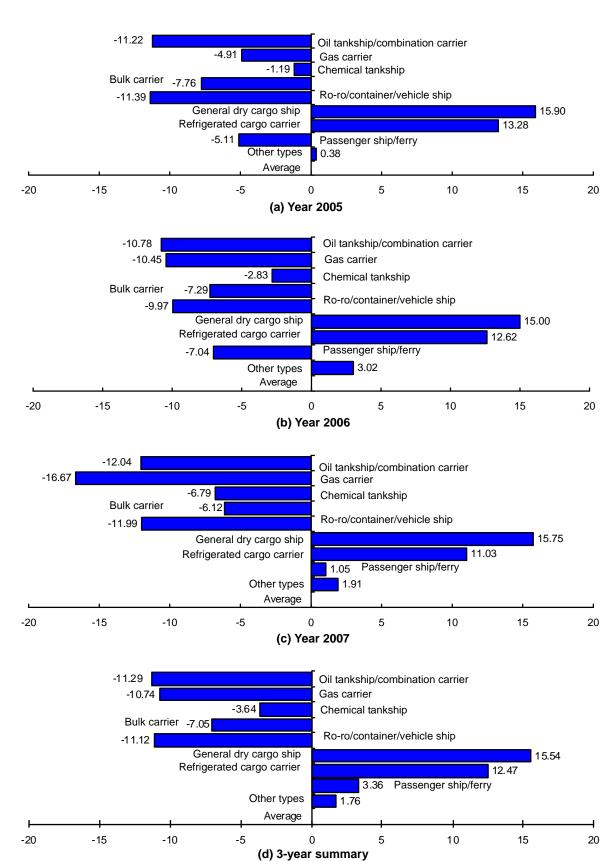


Figure 15: COMPARISON OF INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

<sup>\* %</sup> over [+] or under [-] average

Table 10: INSPECTIONS WITH DEFICIENCIES PER SHIP TYPE

	Number of inspections				N	3-year average			
Type of ship	2005	2006	2007	Total	2005	2006	2007	Total	percentage %
Oil tankship/combination carrier	1,542	1,488	1,352	4,382	883	863	749	2,495	56.94
Gas carrier	442	456	457	1,355	281	266	232	779	57.49
Chemical tankship	1,116	1,075	1,136	3,327	751	709	689	2,149	64.59
Bulk carrier	5,423	5,620	5,496	16,539	3,293	3,456	3,370	10,119	61.18
Ro-ro/container/vehicle ship	4,251	4,496	4,577	13,324	2,427	2,644	2,538	7,609	57.11
General dry cargo ship	6,243	6,438	6,949	19,630	5,268	5,394	5,781	16,443	83.76
Refrigerated cargo carrier	976	973	771	2,720	798	792	605	2,195	80.70
Passenger ship	243	264	310	817	154	163	213	530	64.87
Other types	822	876	991	2,689	566	629	687	1,882	69.99
Total	21,058	21,686	22,039	64,783	14,421	14,916	14,864	44,201	68.23

Table 11: INSPECTIONS AND DETENTIONS PER RECOGNIZED ORGANIZATION

Recognized organization (RO)	No. of overall inspections 2005-2007	No. of overall detentions 2005-2007	No. of RO responsible detentions 2005-2007	3-year avergae detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Alfa Register of Shipping	8	0	0	0	0	0
American Bureau of Shipping	5,417	150	9	2.77	0.17	6.00
Belize Maritime Bureau Inc.	789	84	17	10.65	2.15	20.24
Belize Register Corporation	10	1	0	10.00	0	0
Biro Klasifikasi Indonesia	395	95	11	24.05	2.78	11.58
Bulgarski Koraben Registar	7	2	0	28.57	0.00	0.00
Bureau Securitas	10	0	0	0	0	0
Bureau Veritas	5,102	241	30	4.72	0.59	12.45
Ceskoslovensky Lodin Register	7	0	0	0	0	0
China Classification Society	6,351	107	12	1.68	0.19	11.21
China Corporation Register of Shipping	1,224	143	24	11.68	1.96	16.78
Compania Nacional de Registro e Inspeccion de Naves	7	6	3	85.71	42.86	50.00
Croatian Register of Shipping	102	4	1	3.92	0.98	25.00
Cyprus Bureau of Shipping	13	0	0	0	0	0
Det Norske Veritas	7,220	214	20	2.96	0.28	9.35
Fidenavis SA	26	0	0	0	0	0
Germanischer Lloyd	6,053	190	19	3.14	0.31	10.00
Global Marine Bureau	2,834	460	75	16.23	2.65	16.30
Hellenic Register of Shipping	77	10	0	12.99	0	0
Honduras Bureau of Shipping	7	1	0	14.29	0	0
Honduras International Surveying and Inspection Bureau	18	5	2	27.78	11.11	40.00
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	606	106	29	17.49	4.79	27.36
Indian Register of Shipping	284	17	3	5.99	1.06	17.65
Intermaritime Certification Services, S.A.	16	4	0	25.00	0	0
International Merchant Marine Registry of Belize	83	10	1	12.05	1.20	10.00
International Naval Surveys Bureau	102	18	1	17.65	0.98	5.56
International Register of Shipping	603	80	7	13.27	1.16	8.75
International Ship Classification	505	107	29	21.19	5.74	27.10
Isthmus Bureau of Shipping	1,660	181	23	10.90	1.39	12.71
Korea Classification Society (former Joson Classification Society)	690	117	44	16.96	6.38	37.61
Korea Ship Safety Technology Authority	3	1	1	33.33	33.33	100.00
Korean Register of Shipping	5,664	136	19	2.40	0.34	13.97
Lloyd's Register	7,987	286	31	3.58	0.34	10.84
Marconi International Marine Company Ltd.	2	0	0	0	0.59	0
Maritime Technical Systems and Services	297	40	14	13.47	4.71	35.00
Mongolia Ship Registry	79	20	7	25.32	8.86	35.00
National Cargo Bureau Inc.	10	1	0	10.00	0.00	0
National Shipping Adjusters Inc	5	0	0	0	0	0
Nippon Kaiji Kyokai	20,821	607	68	2.92	0.33	11.20
NV Unitas	1	0	0	0	0.00	0
Overseas Marine Certification Services	89	14	0	15.73	0	0
Panama Bureau of Shipping	393	21	3	5.34	0.76	14.29
Panama Maritime Documentation Services	530	77	11	14.53	2.08	14.29
- Internation Control						0

Recognized organization (RO)	No. of overall inspections 2005-2007	No. of overall detentions 2005-2007	No. of RO responsible detentions 2005-2007	3-year avergae detention percentage%	3-year average RO responsible detention percentage%	3-year average percentage of RO responsible detentions%
Panama Maritime Surveyors Bureau Inc	440	73	12	16.59	2.73	16.44
Panama Register Corporation	343	35	3	10.20	0.87	8.57
Panama Shipping Certificate Inc.	11	1	0	9.09	0	0
Panama Shipping Registrar Inc.	392	86	18	21.94	4.59	20.93
Polski Rejestr Statkow	103	12	4	11.65	3.88	33.33
R.J. Del Pan	8	0	0	0	0	0
Register of Shipping (Albania)	5	2	0	40.00	0	0
Register of Shipping (DPR Korea)	36	7	1	19.44	2.78	14.29
Registro Cubano de Buques	3	0	0	0	0	0
Registro Internacional Naval S.A.	30	0	0	0	0	0
Registro Italiano Navale	756	55	9	7.28	1.19	16.36
Regjistri Laknori Shqiptar	4	1	0	25.00	0	0
RINAVE Portuguesa	10	0	0	0	0	0
Russian Maritime Register of Shipping	2,246	114	4	5.08	0.18	3.51
Russian River Register	5	0	0	0	0	0
Shipping Register of Ukraine	12	0	0	0	0	0
Sociedad Classificadora de Colombia	3	0	0	0	0	0
Societe Generale de Surveillance	3	0	0	0	0	0
Turkish Lloyd	22	5	1	22.73	4.55	20.00
Union Bureau of Shipping	715	127	27	17.76	3.78	21.26
Universal Maritime Bureau	306	39	11	12.75	3.59	28.21
Universal Shipping Bureau	8	1	0	12.50	0	0
Viet Nam Register of Shipping	1,030	132	48	12.82	4.66	36.36
Other	3,865	538	98	13.92	2.54	18.22

See also the note in page 26.

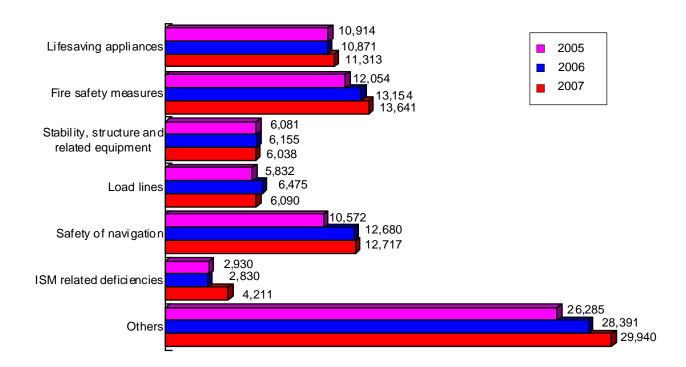
**Table 12: PERFORMANCE OF RECOGNIZED ORGANIZATION** 

Recognized organization (RO)	No. of overall inspections 2005-2007	No. of RO responsible detentions 2005-2007	Low/medium Limit	Medium/high Limit	Excess	Performance level
Korea Classification Society (former Joson Classification Society)	690	44	20	7	3.95	
Mongolia Ship Registry	79	7	4	0	3.43	
International Ship Classification	505	29	16	4	3.18	Very low
Viet Nam Register of Shipping	1,030	48	28	13	2.65	very low
INCLAMAR (Inspection y Classification Maritime, S. de. R.L.)	606	29	18	6	2.48	
Panama Shipping Registrar Inc.	392	18	13	3	2.04	
Maritime Technical Systems and Services	297	14	10	1	1.94	
Union Bureau of Shipping	715	27	21	8	1.71	Low
Global Marine Bureau	2,834	75	69	44	1.18	LOW
Universal Maritime Bureau	306	11	11	2	1.09	
Polski Rejestr Statkow	103	4	5	0	0.84	
Biro Klasifikasi Indonesia	395	11	13	3	0.81	
Panama Maritime Surveyors Bureau Inc	440	12	14	3	0.80	
Belize Maritime Bureau Inc.	789	17	23	9	0.59	
Panama Maritime Documentation Services	530	11	16	5	0.53	
China Corporation Register of Shipping	1,224	24	33	16	0.47	
International Merchant Marine Registry of Belize	83	1	4	0	0.37	Medium
Croatian Register of Shipping	102	1	5	0	0.32	
International Naval Surveys Bureau	102	1	5	0	0.32	
Indian Register of Shipping	284	3	10	1	0.19	
Panama Register Corporation	343	3	12	2	0.09	
International Register of Shipping	603	7	18	6	0.09	
Registro Italiano Navale	756	9	22	8	0.05	
Panama Bureau of Shipping	393	3	13	3	0.02	
Isthmus Bureau of Shipping	1,660	23	43	23	-0.02	
Bureau Veritas	5,102	30	119	85	-1.22	
Lloyd's Register	7,987	31	181	139	-1.52	High
Korean Register of Shipping	5,664	19	131	95	-1.56	
Germanischer Lloyd	6,053	19	139	103	-1.59	

Recognized organization (RO)	No. of overall inspections 2005-2007	No. of RO responsible detentions 2005-2007	Low/medium Limit	Medium/high Limit	Excess	Performance level
Nippon Kaiji Kyokai	20,821	68	450	383	-1.63	
Det Norske Veritas	7,220	20	164	124	-1.65	
Russian Maritime Register of Shipping	2,246	4	56	34	-1.69	
China Classification Society	6,351	12	146	108	-1.75	
American Bureau of Shipping	5,417	9	126	91	-1.77	

- Note: 1) In this table, only recognized organizations (RO) that had more than 60 inspections are taken into account. The formula used is identical to the one used for the Black-Grey-White List. However, the values for P and Q are adjusted to P=2% and Q=1%.
  - 2) ROs involving 60-179 inspections with zero detention are not included in this table.

Figure 16: COMPARISON OF NUMBER OF DEFICIENCIES BY MAIN CATEGORIES

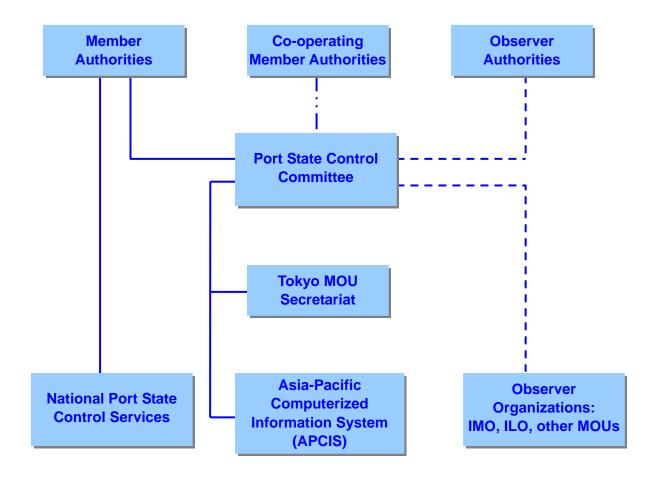


**Table 13: COMPARISON OF DEFICIENCIES BY CATEGORIES** 

	Number of deficiencies						
Nature of deficiency	2005	2006	2007				
Ship's certificates and documents	2,197	2,700	2,892				
Stability, structure and related equipment	6,081	6,155	6,038				
Propulsion and auxiliary machinery	3,352	3,801	4,428				
Alarm signals	355	358	418				
Fire safety measures	12,054	13,154	13,641				
Oil, chemical tankers and gas carriers	210	236	264				
Lifesaving appliances	10,914	10,871	11,313				
Radiocommunications	3,123	3,066	3,213				
Safety of navigation	10,572	12,680	12,717				
Carriage of cargo and dangerous goods	459	555	575				
ISM related deficiencies	2,930	2,830	4,211				
SOLAS related operational deficiencies	4,048	3,186	3,805				
Additional measures to enhance maritime safety	530	819	969				
Bulk carriers-additional safety measures	130	319	311				
Load lines	5,832	6,475	6,090				
MARPOL-Annex I	4,304	5,423	5,657				
MARPOL-Annex II	42	48	98				
MARPOL-Annex III	10	13	21				
MARPOL-Annex IV	46	136	118				
MARPOL-Annex V	2,251	1,931	1,825				
MARPOL-Annex VI	274	383	373				
MARPOL related operational deficiencies	581	379	442				
Certification and watchkeeping for seafarers	1,825	2,237	2,175				
Crew and accommodation (ILO 147)	362	417	319				
Food and catering (ILO 147)	173	220	137				
Working spaces (ILO 147)	550	731	581				
Accident prevention (ILO 147)	580	636	586				
Mooring arrangements (ILO 147)	793	709	653				
Other deficiencies	793 90	709 88	80				
Outer deliciencies	90	00	OU				
Total	74,668	80,556	83,950				

## **ANNEX 3**

# ORGANIZATIONAL STRUCTURE OF THE TOKYO MOU



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

The Port State Control Committee adopted the same method as used by the Paris MOU for assessment of performance of flags. Compared to the calculation method of previous year, this system has the advantage of providing an excess percentage that is significant and also reviewing the number of inspections and detentions over a 3-year period at the same time, based on binomial calculus.

The performance of each flag State is calculated using a standard formula for statistical calculations in which certain values have been fixed in accordance with the agreement of the Port State Control Committee. Two limits have been included in the new system, the 'black to grey' and the 'grey to white' limit, each with its own specific formula:

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

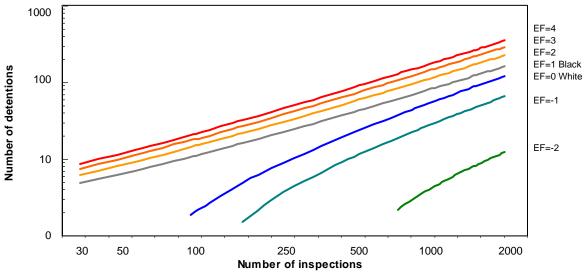
$$u_{white-to-grey} = N \cdot p - 0.5 - z \cdot \sqrt{N \cdot p \cdot (1-p)}$$

In the formula "N" is the number of inspections, "p" is the allowable detention limit (yardstick), set to 7% by the Tokyo MOU Port State Control Committee, and "z" is the significance requested (z=1.645 for a statistically acceptable certainty level of 95%). The result "u" is the allowed number of detentions for either the black or white list. The "u" results can be found in the table as the 'black to grey' or the 'grey to white' limit. A number of detentions above this 'black to grey' limit means significantly worse than average, where a number of detentions below the

'grey to white' limit means significantly better than average. When the amount of detentions for a particular flag State is positioned between the two, the flag State will find itself on the grey list. The formula is applicable for sample sizes of 30 or more inspections over a 3-year period.

To sort results on the black or white list, simply alter the target and repeat the calculation. Flags which are still significantly above this second target are worse than the flags which are not. This process can be repeated, to create as many refinements as desired. (Of course the maximum detention rate remains 100%!) To make the flags' performance comparable, the excess factor (EF) is introduced. Each incremental or decremental step corresponds with one whole EF-point of difference. Thus the excess factor EF is an indication for the number of times the vardstick 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 Kiribati were subject to 37 inspections of which 15 resulted in a detention. The "black to grey limit" is 6 detentions. The excess factor is 7.72.

N = total inspections

P = 7%

Q = 3%

Z = 1.645

How to determine the black to grey limit:

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

$$u_{black-to-grey} = 37 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{37 \cdot 0.07 \cdot 0.93}$$

$$u = 6$$

The excess factor is 7.72. 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 6.72, and the outcome has to be added to the normal value for 'p':

$$p + 6.72q = 0.07 + (6.72 \cdot 0.03) = 0.2716$$

$$u_{excessfactor} = 37 \cdot 0.2716 + 0.5 + 1.645 \cdot \sqrt{37 \cdot 0.2716 \cdot 0.7284}$$

$$u_{excessfactor} = 15$$

#### **Example flag on Grey list:**

Ships of Myanmar were subject to 107 inspections, of which 9 resulted in a detention. The "black to grey limit" is 12 and the "grey to white limit" is 3. The excess factor is 0.66.

How to determine the black to grey limit:

$$u_{black-to-grey} = 107 \cdot 0.07 + 0.5 + 1.645 \cdot \sqrt{107 \cdot 0.07 \cdot 0.93}$$

$$u_{black-to-grey} = 12$$

How to determine the grey to white limit:

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

$$u_{\text{white - to - grey}} = 107 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{107 \cdot 0.07 \cdot 0.93}$$

$$u_{white-to-grey} = 3$$

To determine the excess factor the following formula is used:

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

$$ef = (9-2.65.)/(12.33-2.65)$$

$$ef = 0.66$$

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

Ships of Marshall Islands were subject to 1,365 inspections of which 34 resulted in detention. The "grey to white limit" is 80 detentions. The excess factor is -1.23.

How to determine the grey to white limit:

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

$$u_{\text{white - to - grey}} = 1,365 \cdot 0.07 - 0.5 - 1.645 \cdot \sqrt{1,365 \cdot 0.07 \cdot 0.93}$$

$$u_{white-to-grey} = 80$$

The excess factor is -1.23. This means that 'p' has to be adjusted in the formula. The grey to white limit has an excess factor of 0, so to determine the new value for 'p', 'q' has to be multiplied with -1.23, and the outcome has to be added to the normal value for 'p':

$$p + (-1.23q) = 0.07 + (-1.23 \cdot 0.03) = 0.0331$$

$$u_{excessfactor} = 1,365 \cdot 0.0331 - 0.5 - 1.645 \cdot \sqrt{1,365 \cdot 0.0331 \cdot 0.9669}$$

$$u_{excessfactor} = 34$$

According to the decision by the Port State Control Committee, flags involving 30-49 port State inspections with nil detentions are listed on top of the White List.

# **TOKYO MOU SECRETARIAT**

The Secretariat (Tokyo MOU Secretariat) of the Memorandum of Understanding on Port State Control in the Asia-Pacific Region is located in Tokyo, Japan. The Secretariat may be approached for further information or inquiries on the operation of the Memorandum.

### **ADDRESS OF THE SECRETARIAT**

### STAFF OF THE SECRETARIAT

The address of the Tokyo MOU Secretariat reads:

The staff of the Secretariat consists of:

Tokyo MOU Secretariat
Ascend Shimbashi 8F

6-19-19 Shimbashi

Minato-ku, Tokyo Japan 105-0004

Tel: +81-3-3433-0621

Fax: +81-3-3433-0624

E-mail: secretariat@tokyo-mou.org

Mitsutoyo Okada

Secretary

Ikuo Nakazaki

**Deputy Secretary** 

Ning Zheng

**Technical Officer** 

Fumiko Akimoto Projects Officer