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ANNUAL REPORT



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1. Executive summary

At the close of the 20th century, the maritime world was shocked by 2 major shipping casualties, the loss of the Maltese tanker 'Erika' and the grounding of the Norwegian high-speed-craft 'Sleipner'. The first resulted in extensive oil pollution of the marine environment and the second caused the tragic loss of many lives. Two key areas of concern in today's shipping operations, lack of maintenance and poor operational standards, may well have contributed to these serious incidents.

The Paris MOU had identified these areas as "the weak link" in the safety chain of the shipping industry. In 1999, the MOU addressed the issue of maintenance by conducting a 3 month Concentrated Inspection Campaign (CIC) of the structural safety of bulk carriers over 30,000 gross tons and more than 15 years old. Eight (10%) of the bulk carriers inspected had structural deficiencies which were considered serious enough to detain the ship and prevent it sailing until repairs were made.

To support already stringent operational control provisions of the MOU, scenarios for operational inspections of ferries and passenger ships were

developed. They are expected to be implemented in 2000, and will provide PSC Officers with a new tool to evaluate the performance of the crew in emergency situations.

Despite the efforts of port State control regimes some ship owners, flag States and those who act on their behalf, still avoid their responsibility by operating or condoning substandard ships and continue to be caught in the net ¹⁾ of the Paris MOU port States.

The statistics in this report include some major changes. Detention rates are related to the total number of inspections instead of the number of individual ships, as in previous reports, and the performance of flag States include a statistical analysis to enable identification of the full range between quality flags and flags with a consistently poor performance. The performance of individual classification societies is measured for the first time. The downward trend in the detention figures highlighted in last year's annual report levelled off in 1999. The overall detention percentage of ships inspected in the MOU region dropped from 11.2 in 1995 to 9.1 in 1998. In 1999 the detention percentage remained at 9.1.

The number of deficiencies recorded during port State control inspections in 1999 (60,670) showed a substantial increase for the second year in a row and is 5% higher when compared with last year. A development of growing concern is the substantial consistent increase recorded in operational deficiencies related to safety and environmental procedures. Over a four-year period these deficiencies have increased by 74%. In the light of recent disasters, ship owners and flag States should recognise the seriousness of these figures and take adequate measures to improve operational safety on board.

For the first time, the performance of classification societies that have been authorised to conduct surveys and issue certificates on behalf of the flag State has been monitored in accordance with agreed criteria. In 24% (400) of the total number of detentions (1,684), class was held responsible for one or more detainable deficiencies.

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¹⁾ "Tightening the Net" Inter-regional action to eliminate substandard shipping (Vancouver, 1998)



Measures to concentrate PSC efforts on potentially sub-standard ships by using a targeting system are being implemented in order to use resources effectively and to benefit ships with a good safety record.

The Paris MOU made a significant step towards increased transparency in deciding to make information on port State control inspection results available to industry and other interested parties through EQUASIS.

2. Paris MOU developments

GENERAL

Once a year the Port State Control Committee, which is the executive body of the Paris MOU, meets in one of the Member States. The Committee considers policy matters concerning regional enforcement of port State control, reviews the work of the Technical Evaluation Group and task forces and decides on administrative procedures.

The task forces, of which 10 were active in 1999, are each assigned a specific work programme to investigate improvement of operational, technical and administrative port State control procedures. Reports of the task forces are submitted to the

Technical Evaluation Group (TEG) at which all the Paris MOU members and observers are represented. The evaluation of the TEG is submitted to the Committee for final consideration and decision making.

During the 32nd meeting of the Committee, Alan Cubbin of the UK was elected to the chair for a period of 3 years following the retirement of Capt Odd Vollene. Mr Cubbin is the current Director of the Maritime and Coast Guard Agency's Marine Standards Division and has responsibility for PSC policy in the Agency.

The MOU Advisory Board advises the Port State Control Committee on matters of a political and strategic nature, and provides direction to the task forces and Secretariat in between meetings of the Committee. The board meets several times a year and in 1999 was composed of participants from Canada, Greece, Norway, the United Kingdom and the European Commission.

PORT STATE CONTROL COMMITTEE

The Port State Control Committee (PSCC) held its 32nd meeting in Stockholm, Sweden on 10-13 May 1999.

Important decisions by the Committee included the decision to make more information available to EQUASIS as part of the Paris MOU support for the world wide Quality Shipping Campaign. This decision is in line with those taken by the US Coast Guard and the Tokyo MOU. The initiative also addresses the concerns highlighted in the Action Plan emanating from the Joint Ministerial Conference entitled "Tightening the Net", held in Vancouver in 1998.

The Committee decided to publish monthly a list of companies responsible for the safe operation of ships that have been detained more than once or having more than one ship detained within the previous 12 months.

In a further initiative on monitoring the performance of classification societies, the Committee agreed to start publishing data



Operational safety: "a growing concern"



related to their performance in cases of detention. The evaluation of their performance will be based on the criteria adopted by the PSCC last year. As a next step the PSCC will decide on possible changes to the present target factor in order to take into consideration the differing performances of the classification societies.

On a more practical note, the committee adopted "Guidelines for control of provisions under STCW 95" with respect to documentation of qualifications and training to be held by officers and crew on board all types of ships.

In view of the importance of the Y2K issue to ship safety, the Committee decided that PSC officers

should board ships to ask for evidence that the issue had been addressed and that the crew were well trained in using the back-up systems.

The Annual Report of the Paris MOU for 1998, and in particular the list of flag States exceeding the average detention percentage, was considered. Each of the flag States in the list received a letter from the Paris MOU Secretariat to inform them that their ships will be targeted for priority inspections for a period of

one year. It was with concern that the Committee noted that two of it's own members, Croatia and the Russian Federation were included in the new list.

The results of the Joint Ministerial Conference on port State control, which was held a few months prior to the Committee meeting were submitted by Canada. A number of initiatives emanating from the Ministerial declaration were identified and are being considered for further joint action between the Paris and Tokyo MOU.

TECHNICAL EVALUATION GROUP

The Technical Evaluation Group (TEG) convened twice during 1999. Several task forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee. Issues being considered by TEG are:

- requirements for a new Paris MOU inspection report database
- evaluation of the Concentrated Inspection Campaign on bulk carriers
- criteria for the assessment of responsibility of classification societies
- development of a programme for advanced training for PSCO's
- harmonised scenario's for operational control on board ferries and passenger ships
- preparations for a Concentrated Inspection Campaign on Securing of Cargo
- evaluation of the target factor for ships
- development of a new Manual for PSCO's
- guidelines for inspection of working and living conditions



29th PSC Seminar, Bangor, Northern Ireland.

PORT STATE CONTROL SEMINARS

28TH PSC SEMINAR

The 28th Port State Control Seminar of the Paris MOU was held in Antwerp, Belgium on 23-25 June 1999. The Seminar was attended by Port State Control Officers from the Paris MOU, as well as participants from the Viña del Mar Agreement, Estonia, Iceland, Israel and Latvia. The main topics of discussion were the International Maritime Dangerous Goods Code (IMDG Code) and the Global Maritime Distress and Safety System (GMDSS).Particular attention was paid to the "provisional criteria for the responsibility assessment of classification societies". These criteria are used to identify detainable deficiencies



listed on the PSC inspection report for which class is responsible.

29TH PSC SEMINAR

The 29th PSC Seminar was held on 19-21 October 1999, in Bangor, Northern Ireland. It was attended by Port State Control Officers from the Paris MOU, as well as participants from the Tokyo MOU, Viña del Mar Agreement, Estonia, Iceland, Latvia, South Africa and Slovenia. The main focus of the seminar was the preparation for a Concentrated Inspection Campaign on cargo securing, which will be held in 2000. An expert from the Netherlands informed the participants of the procedures and guidelines for the CIC and the requirements of the Cargo Securing Manual. Other items discussed during the seminar were the Y2K problem, class related detainable deficiencies and the results of the Concentrated Inspection Campaign on the structural safety of bulk carriers.

DEVELOPMENT OF ADVANCED TRAINING FOR PSCO'S

As announced in last year's report, the Paris MOU has agreed on the need to establish a programme of advanced training of PSCO's, in order to keep abreast of technological change in the maritime field and of corresponding regulatory developments and to harmonise the PSC activities in the Paris MOU region. The European Commission, which attaches great value to this programme and is therefore prepared to contribute financially, selected a consortium of professional training institutes to develop modules for advanced port State control training. The training material has now been finalised and the first courses are expected to start after the selection of training institutes has been completed.

UPGRADING OF SIRENAC INFORMATION SYSTEM

In 1998 a major revision of SIReNaC ², the PSC database of the Paris MOU, which is administered by the Centre Administratif des Affaires Maritimes in St. Malo, France, was completed. New initiatives are already under consideration to further enhance the system to meet the needs of users. In addition to the database, a new statistical information system has been developed to allow for various queries by the MOU Members and the European Commission. This "info-centre" will enable on-line retrieval of information on

inspections in response to structured queries and is expected to be operational in 2000. The figures presented in this report have been produced with the assistance of the info-centre.

PARIS MOU ON THE INTERNET.

The Paris MOU Internet site on the World Wide Web has been in increasingly popular demand from a variety of visitors. These include governmental agencies, charterers, insurers, classification societies, ship owners and a wide range of other users. In particular the monthly information on detentions, the annual report and news items have been downloaded in large numbers from the website, which can be found at "www.parismou.org". The website was expanded during 1999 and contains up-to-date information on the operation of the Paris MOU, including —

- general information on port State control
- an electronic copy of the Annual Report
- down-loadable text of the Paris MOU, including PSC procedures
- contact addresses of the participating maritime Authorities
- a database of detained ships, including downloadable monthly lists of detentions
- a list of ships which have been banned from the Paris MOU region
- important PSC related news items.

During 1999 the website was visited by a large number of countries and organizations (altogether 10,794), with a total of 823,629 consultations for information, an average of 2,866 per day. A total of 5,878 megabytes of information was downloaded from the site.

² Système d'Information Relatif aux Navires Contrôllés.



Control initiatives on the Y2K problem

Worldwide, serious problems were anticipated with regard to the functioning of computer embedded microchips during the changeover to the new millennium and other critical dates. The shipping industry also addressed the "year 2000" (Y2K) problem since various critical systems on board could be effected. The IMO issued several guidance documents, including Y2K checklists.



Verification of Y2K compliance

The Port State Control Committee decided that after October, every inspection carried out in the region should include an assessment of how ships were addressing the Y2K problem. In assessing Y2K compliance Port State Control Officers were guided by IMO circular letter 2121, including the "Year 2000 Code of Good Practice". In accordance with the checklist, the captain was requested to indicate to what extent the ship was compliant and whether contingency plans were in place.

Although many ships had taken appropriate measures after the PSC inspection, a number of potential non-compliant ships still remained. A list of over 100 ships on which the Y2K issue had not been addressed sufficiently was posted on the Paris MOU website in December 1999. Insurance companies showed an active interest in the publication and addressed ship owners requiring positive evidence of Y2K compliance. Fortunately, no major incidents occurred at the start of the year 2000.



4. Concentrated Inspection Campaigns

Over the past years several concentrated inspection campaigns have been held in the Paris MOU region. These campaigns focus on a particular area of compliance with international regulations with the aim of gathering information on, and enforcing, the level of compliance. Each campaign is prepared by experts and focuses on a number of specific items for inspection. Experience shows that they serve to draw attention to the chosen area of compliance.

The structural condition of large bulk carriers has been a growing cause for concern for many years. Older ships in particular, that carry bulk cargoes have been involved in serious casualties.

The Port State Control Committee was in full agreement that every action should be taken to identify bulk carriers that may have structural problems. The Committee decided to launch a concentrated inspection campaign of bulk carriers over 30.000 GT and more than 15 years old that were due for an expanded inspection. Specific guidelines were developed to assist Port State Control Officers in these pections. The vessels selected were given notice to make the necessary preparations for a

structural inspection which included inspection of ballast tanks and cargo holds.

Although checks on the structural safety of large bulk carriers calling at European and Canadian ports show that some improvements have been made in recent years, the campaign that took place from 1 April to 30 June 1999 revealed that serious defects are still being found.

The detention rate of bulk carriers during the campaign was 10% compared with a rate of 13.9% for all bulk carriers inspected in 1998. When taking into account the greater scrutiny that

the ships received during this campaign, the results suggest that the situation is improving. The recent decline in loss figures for this type of vessel has also been encouraging. Nevertheless the level of deficiencies being found during the campaign leaves no room for complacency. All of the detained ships had been surveyed by members of the International Association of Classification Societies (IACS) under the enhanced survey programme.

Eight of the bulk carriers inspected had structural deficiencies, which were considered serious enough to detain the ship and prevent it sailing until repairs were made. The defects found were varied but included holes in decks and hatch covers, badly wasted and cracked longitudinal and transverse stiffeners in holds and tanks. When



Campaign on bulk carriers confirmed structural problems.

damaged air pipes and other loadline items are taken into account a total of 40 ships, just over half, were found to have at least one deficiency (some of them minor) affecting the structural safety of the ship. Inspectors found that in all cases cargo operations were being carried out in accordance with the plan agreed with the terminal and that bending and sheer stresses were being maintained within maximum limits.



The relatively small sample of inspections made it difficult to draw any conclusions relating to the flag, class, age, tonnage of the ship or the cargo being carried. Bahamas, Cyprus and Panamanian registered and Lloyds Register and Class NK classed ships recorded the most problems in terms of structural defects and detentions.

SAYINUR YARDIMCI

Port State Control training in Iceland

5. Membership to the Paris MOU

In preparation for prospective new members of the Paris MOU provisional criteria for cooperating status or observer status for nonmember states and newly developed PSC regions were agreed by the Committee.

Specific criteria, including a self-evaluation exercise, have to be met before co-operating status can be granted. Authorities which are a member of another regional agreement, or located in the region of another regional agreement, or located outside the regional scope of the Paris MOU are not eligible for co-operating status.

Regional agreements seeking observer status should demonstrate that their member Authorities have an acceptable overall flag State record and have a similar approach in terms of commitment and goals to that of the Paris MOU.

The maritime Authority of Iceland, which has been a co-operating member to the Paris MOU since May 1996, applied for full membership during the 32nd meeting of the Port State Control Committee in 1999. The Committee welcomed the initiative by the Icelandic Maritime Authority and agreed that a fact finding mission should take place in March

2000 in order to assess whether the qualitative criteria of the MOU are met. In preparation for the assessment a port State control training course was organised in Iceland by the Maritime and Coastguard Agency (UK) and the Secretariat during September 1999.

6. Co-operation with other organisations

The strength of regional regimes of port State control bound by geographical circumstances and interest is

widely recognised. During the Joint Ministerial Conference in Vancouver, the existing cooperation between the Paris and Tokyo Memorandum of Understanding was firmly reinforced. The Secretariats of both regions have participated in each other's meetings.

The Paris MOU has also provided advice in setting up port State control regimes in Latin America and the Caribbean. Co-operation on an administrative level will help to ensure that port State control efforts remain compatible as far as practicable.

The long-standing co-operation with the United States Coast Guard has been extended by giving the Coast Guard access to the SIReNaC database.

Since the early days the International Labour Organization and the International Maritime Organization have participated in the meetings of the Paris MOU.

Port State Control initiatives from the Paris MOU have been introduced in the work of the IMO,



resulting in international agreed standards for control procedures laid down in IMO Resolution A.787(19). The 1998 Annual Report, including inspection data, has been submitted by the United Kingdom to the Sub-Committee on Flag State Implementation. IMO members appearing on the list of targeted flag States are invited to comment on what steps will be taken to improve their safety record.

During the 32nd meeting of the Port State Control Committee in 1999, criteria for granting observer status to newly emerging PSC regions in other areas of the world were adopted. Such regions are required to meet the criteria before observer status can be achieved. The

Caribbean MOU on Port State Control was the first regional organisation to be measured against these criteria and was granted official observer status to the Paris MOU.



INTRODUCTION

During 1999, 18,399 inspections were carried out in the Paris MOU region on 11,248 foreign ships registered in 104 different flag States. The number of inspections is slightly higher than the inspection figure for 1998 (17,643) and nearly 10% higher than the number of inspections carried out in 1997 (16,813), (16,070 in 1996).

The number of individual ships inspected in 1999, 11,248, shows a slight increase of 80 compared with the number inspected in 1998 (11,168) and an increase of 529 compared with 1997 (10,719) (10,256 in 1996). This marginal increase may indicate that the Paris Memorandum is slowly



Hygienic conditions leave room for improvement

reaching the ceiling of ships qualifying for an inspection. The overall inspection rate in the region was 27.6% in 1999, compared with 26.5% in 1998, 25.6% in 1997 and 24.5% in 1996.

The slightly increased overall figure for 1999 also indicates that despite the fact that the Paris MOU members have targeted potentially substandard ships, extra effort was made to increase the number of inspections. A chart showing the individual efforts of the Paris MOU members is included in the statistical annexes to this Annual Report. The EU Directive on Port State Control

which entered into force in 1996, makes the inspection commitment mandatory for EU Member States.

DETENTIONS

As mentioned earlier, several changes have been made in the presentations of PSC statistics. The Committee decided that detention percentages



should be expressed in relation to the number of inspections, rather than individual ships. Since many ships have been detained more than once during an annual period, it is appropriate to relate detentions to inspections. Since the number of inspections is always higher than the number of individual ships, the detention percentage based on inspections is correspondingly lower. For

comparison a table indicating the relationship of inspections to individual ships has been included in Annex 1.

The number of ships detained in 1999 for deficiencies clearly hazardous to safety, health or the environment amounted to 1,684. It compares with the number detained in 1998 of 1,598, 1,624 in 1997, 1,719 in 1996 and 1,837 in 1995. After 4 years of gradual decrease in detentions, the slight increase can be explained by more rigorous targeting of potentially substandard ships. Also more PSC efforts have been aimed at areas such as operational control, MARPOL and safety management systems.

This annual report contains 3

new tables, replacing the "black list" of flags with a consistent poor safety record. Each table is still based on the 3-year rolling average principle but now indicate the full spectrum between quality flags and flags with a poor performance.

As expected a "hard core" of States that have persistently figured in the list of "targeted" flags since it was introduced in this annual report in 1992, are still present on the "Black List". The following 6 flag States have maintained a poor performance and have been included in the top 10 for 4 consecutive years, Belize, Honduras, Lebanon, Romania, Syrian Arab Republic and Turkey.

Estonia and Iran are no longer included in the 1999 list. Albania, Azerbaijan, Bangladesh, Cuba, Georgia, Latvia, Mauritius and Pakistan have now been included.

Quality flags can be found in the new "White List" and may pride themselves on a fleet of ships with a consistently low detention record. The flags of

Japan, Germany, Ireland, Finland and the Netherlands are placed highest on the list. These flags will also find their ships subject to less port State control inspections since there is evidence that they are capable of running a reputable register.



Flag States with an average performance have been indicated in the new "Grey List". These flags may find their appearance on this list an incentive to improve and move to the "White List". At the same time these flags should be careful not to neglect control over their ships and risk ending up on the "Black List" next year. Looking at detentions by ship type over several years, it is noted that general dry cargo ships and bulk carriers still account for over 75% of all detentions. On a more positive note an improvement is seen in the detention rate in 1999 of bulk carriers and chemical tankers compared with 1998 figures.

Proper maintenance: an ISM issue

The number of detained passenger ships and ferries increased from 22 in 1998 to 37 in 1999. This fact combined with an increase in safety related operational deficiencies is grounds for maintaining intensified control on these ships. Statistical annexes to this report show the detention percentage for each ship type in 1999, 1998 and 1997. In summary, although the percentage of ships detained has decreased from 11.21% in 1995 to 9.15% in 1999, the actual number of ships detained in 1999 of 1,684 is still unacceptably high.

BANNING OF SHIPS

During 1999 a total of 9 ships were banned from the Paris MOU, because they failed to call at an agreed repair yard (4), jumped detentions (4) or were not certified in accordance with the ISM Code (1). By the end of 1999 the ban had been lifted on 9 ships after verification that all deficiencies had been rectified. The banning remained in place for 12 other ships.



PERFORMANCE OF CLASSIFICATION SOCIETIES

During 1999 information was recorded in the database concerning responsibility of classification societies for detainable deficiencies. When one or more detainable deficiencies could be attributed to the responsibility of a classification society in accordance with the criteria this was recorded and the class was informed accordingly. Out of 1,684 detentions 24% (400) were considered class related.

When considering the ratio between detentions and individual ships inspected where 10 or more inspections were involved, Registro Internacional Navale (Portugal) 36.4%, International Naval Surveys Bureau (U.S.A.) 33.3%, Panama Register Corp 33.3%, Inclamar (Cyprus) 27.8% and Croatian Register of Shipping 27.3% scored highest. On the other hand, when comparing absolute numbers Lloyd's Register of Shipping (U.K.) 53, Bureau Veritas (France) 45, Register of Shipping (Russia) 41, RINA (Italy) 31 and Germanischer Lloyd (Germany) 29 were involved in most class related detentions.

DEFICIENCIES

A total of 60,670 deficiencies were recorded during port State control inspections in 1999, a substantial increase (5%) on the number of 57,831 recorded in 1998 (53,331 in 1997). The increase in the number of deficiencies recorded may be a product of more selective targeting of ships for inspection.

Prime safety areas, such as life saving appliances, fire fighting equipment, safety in general and navigation, still account for 55% of the total number of deficiencies. An increase in SOLAS and MARPOL operational deficiencies noted last year, remains a cause of concern. SOLAS related operational deficiencies increased

from 723 in 1997 to 975 deficiencies in 1999, MARPOL related operational deficiencies from 262 in 1997 to 558 in 1999. Garbage management violations increased from 70 in 1998 to 632 in 1999.

The International Safety Management Code came into force for certain categories of ships from 1 July 1998. In the year under review 498 deficiencies were recorded. The figures indicate that older ships have more problems with the implementation of a management system. On ships older than 15 years the number of deficiencies is 6 times higher than on ships of less than 5 years old.

The numbers of deficiencies for major categories of deficiencies may be expressed as a ratio of the number of inspections or as a ratio of the number of ships involved. The deficiency ratio for 1999 in relation to the number of individual ships involved amounted to 5.39 (1998: 5.17, 1997: 4.97; 1996: 5.26).

However, the above deficiency ratios have been expressed in relation to all ships involved in port State control inspections, irrespective of whether or not deficiencies were found. Obviously, only ships in which deficiencies were found are responsible for the total number of deficiencies. Considering that in 10,255 inspections (55.74% of all inspections) deficiencies were noted, it is this number that is responsible for the total of 60,670 deficiencies. This implies that the deficiency ratio for inspections in which deficiencies were noted amounted to 5.92 (1998: 5.98; 1997: 6.02; 1996: 6.23), which is a decrease for the fourth year in a row.

Garbage management has become a focal area



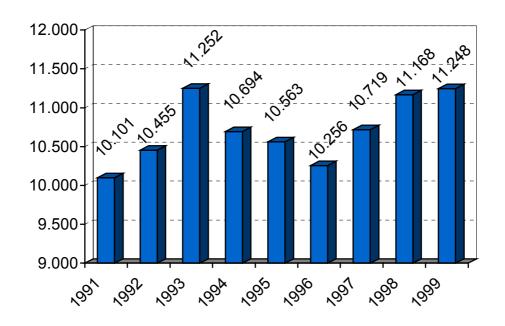


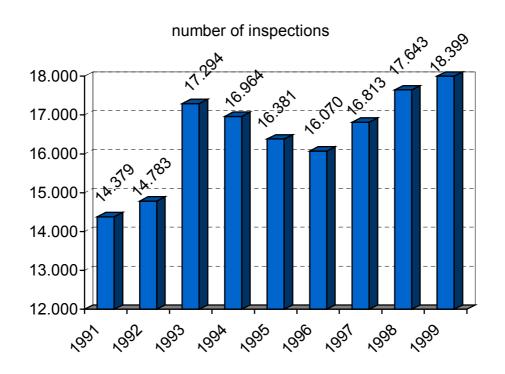
Statistical Annexes to the 1999 ANNUAL REPORT



Basic port State control figures 1999 - 1

number of individual ships inspected

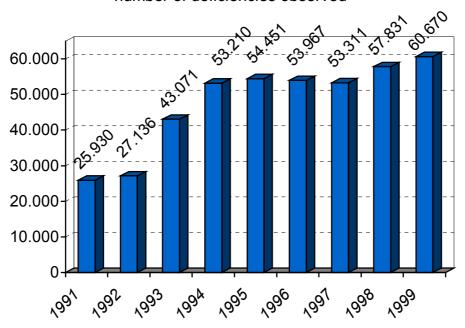


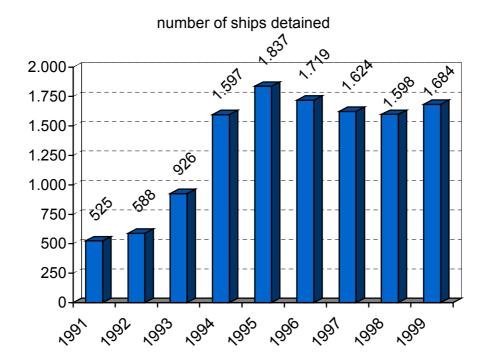




Basic port State control figures 1999 - 2



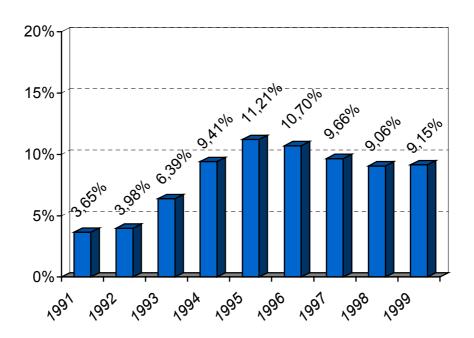




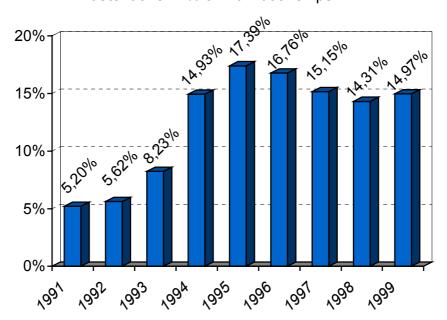


Basic port State control figures 1999 - 3

detentions in % of inspections

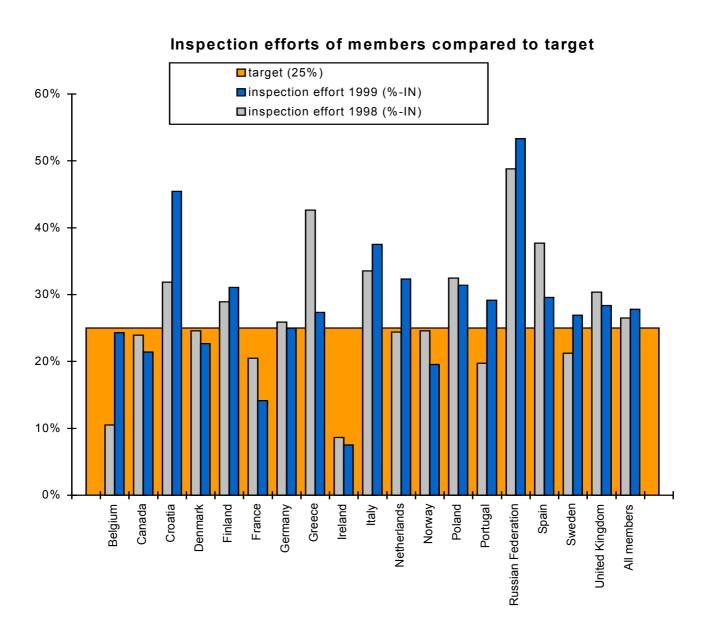


detentions in % of individual ships



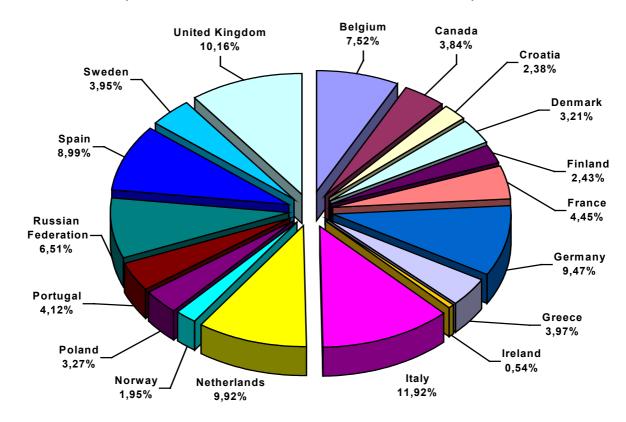


Inspection efforts - 1





Inspection efforts – 2 MOU port States' individual contribution to the total amount of inspections



MOU port State	Estimated Ship calls	Inspections	Inspections with deficiencies	Detentions	Detents with Class related deficiencies	%-Insp. With deficiencies	% Detained	% Inspected Ship calls (25% commitment)	% Inspection of MOU total
Belgium	5686	1383	750	168	56	54,2	12,1	24,3%	7,5%
Canada	3299	707	333	75	15	47,1	10,6	21,4%	3,8%
Croatia	964	438	282	53	18	64,4	12,1	45,4%	2,4%
Denmark	2600	590	166	31	11	28,1	5,3	22,7%	3,2%
Finland	1442	448	171	34	12	38,2	7,6	31,1%	2,4%
France	5792	819	426	91	51	52,0	11,1	14,1%	4,5%
Germany	6980	1743	955	110	27	54,8	6,3	25,0%	9,5%
Greece	2670	730	524	155	33	71,8	21,2	27,3%	4,0%
Ireland	1330	100	68	11	5	68,0	11,0	7,5%	0,5%
Italy	5850	2194	1023	211	43	46,6	9,6	37,5%	11,9%
Netherlands the	5645	1825	912	139	20	50,0	7,6	32,3%	9,9%
Norway	1830	358	130	24	19	36,3	6,7	19,6%	2,0%
Poland	1914	601	356	37	12	59,2	6,2	31,4%	3,3%
Portugal	2600	758	472	57	10	62,3	7,5	29,2%	4,1%
Russian Federation	2726	1454	956	161	3	65,7	11,1	53,3%	7,9%
Spain	5594	1654	1059	176	24	64,0	10,6	29,6%	9,0%
Sweden	2700	727	307	17	4	42,2	2,3	26,9%	4,0%
United Kingdom	6588	1870	1365	134	34	73,0	7,2	28,4%	10,2%
	66210	18399	10255	1684	397	55,7%	9,15%	27,8%	100,0%



Black - Grey - White Lists*

Flag state	Inspections 1997-1999	Detentions 1997-1999	Black to Grey Limit (max allowed detentions)	Grey to White Limit (min required detentions)	Excess Factor
		BLAC	K LIST		
Albania	36	18	5		10,50
Honduras	457	162	41		9,25
Belize	497	156	44		7,99
Lebanon	194	62	19	very	7,50
Syrian Arab Republic	359	109	33		7,47
Romania	310	79	29	high	5,83
Cambodia	286	71	27	high	5,57
Turkey	1987	436	158		5,48
Georgia	33	10	5	risk	4,61
Algeria	179	40	18		4,47
₋ibyan Arab J.	105	25	12		4,42
St. Vincent and Gren.	1901	331	151		4,00
≣gypt	225	45	22		3,93
Morocco	193	39	19	high	3,88
Mauritius	33	8	5	risk	3,03
Bangladesh	33	8	5		3,03
Jkraine	815	105	69		2,34
Malta	4225	467	323	medium to	2,09
Pakistan	35	7	5	high risk	2,06
Cyprus	4439	480	339	ŭ	2,02
Panama	4545	471	346		1,88
Malaysia	129	18	14		1,79
Cuba	62	10	8	d!	1,76
Russian Federation	3143	308	244	medium	1,65
Bulgaria	305	34	29		1,46
Γhailand	125	16	13	risk	1,45
₋atvia	157	19	16		1,40
Croatia	202	23	20		1,34
Azerbaidzhan	97	12	11		1,16
		GRE		1 '	
Lithuania	383	35	35	19	0,97
Faeroe Islands	43	6	6	-1	0,96
Kuwait	45	5	6	-1	0,78
ran	146	13	15	5	0,75
taly	623	48	54	33	0,70
Philippines 	311	24	29	14	0,64
ndia	216	17	21	9	0,64
Antilles, Netherlands	248	19	24	11	0,62
Estonia	421	31	38	21	0,58
Cayman Islands	147	11	15	5	0,56
Tunisia	66	5	8	1	0,55
Portugal	520	37	46	27	0,53



Flag state	Inspections 1997-1999	Detentions 1997-1999	Black to Grey Limit (max allowed detentions)	Grey to White Limit (min required detentions)	Excess Factor	
Brazil	60	4	7	1	0,47	_
Qatar	48	3	6	-1	0,45	•
Tuvalu	76	4	9	2	0,34	σ
Saudi Arabia	79	4	9	2	0,32	e <u>e</u>
Greece	1477	97	120	87	0,31	better performance
Israel	99	5	11	3	0,29	ō
Myanmar	32	1	5	-1	0,28	<u>e</u> n
Vanuatu	134	7	14	5	0,28	₫
Ethiopia	36	1	5	-1	0,25	∄
Taiwan	103	4	11	3	0,16	an
Spain	139	6	15	5	0,16	Ř
Man, Isle of	407	22	37	20	0,14	()
Hong Kong	266	13	25	12	0,12	_
Luxembourg	113	4	12	3	0,11	_
Poland	407	21	37	20	0,08	·
Switzerland	64	1	8	1	0,05	90
China	458	23	41	23	0,02	
		WHIT	E LIST			better performance
Barbados	298	13		14	-0,02	- e
Korea, Republic of	155	5		6	-0,04	9
Bahamas	3142	184		196	-0,13	ટ્ર
Antigua and Barbuda	2222	118		136	-0,28	Ä
Bermuda	184	5		7	-0,40	မ
USA	161	4		6	-0,40	_
Liberia	2680	130		166	-0,47	
Singapore	672	27		36	-0,49	Ť
France	303	9		14	-0,60	
Austria	134	2		5	-0,70	better
Marshall Islands	324	9		15	-0,71	E
United Kingdom	521	15		27	-0,85	
Denmark	1204	40		70	-0,89	pertormance
Norway	2638	88		163	-1,01	7
Sweden	802	21		44	-1,07	7
Netherlands	2185	66		133	-1,10	<u>a</u>
Finland	439	8		22	-1,23	Ç
Ireland	243	3		10	-1,25	ወ
Germany	1814	42		109	-1,34	•
Japan	98	0		3	-2,00	

Explanatory note on page 40 p=7% $z_{95\%} = 1.645$ q = 3%



Inspections, detentions and deficiencies 1999

Flag state	Inspections	Detentions	Inspections with deficiencies	Detention-%	Inspection-% with deficiencies
Albania	15	9	14	60,0%	93,3%
Algeria	60	24	56	40,0%	93,3%
Angola	1	1	1	100,0%	100,0%
Antigua and Barbuda	884	42	483	4,8%	54,6%
Antilles, Netherlands	100	8	53	8,0%	53,0%
Austria	43	0	12	0,0%	27,9%
Azerbaijan	34	6	28	17,6%	82,4%
Bahamas	1101	59	591	5,4%	53,7%
Bahrain	5	0	2	0,0%	40,0%
Bangladesh	10	0	10	0,0%	100,0%
Barbados	86	1	47	1,2%	54,7%
Belgium	3	0	1	0,0%	33,3%
Belize	188	56	161	29,8%	85,6%
Bermuda	69	2	24	2,9%	34,8%
Bolivia	10	7	10	70,0%	100,0%
Brazil	19	2	11	10,5%	57,9%
Bulgaria	111	9	73	8,1%	65,8%
Cambodia	158	48	141	30,4%	89,2%
Canada	7	2	7	28,6%	100,0%
Cape Verde	11	3	10	27,3%	90,9%
Cayman Islands	59	5	28	8,5%	47,5%
Chile	2	0	1	0,0%	50,0%
China People's Rep.	132	3	62	2,3%	47,0%
Colombia	1	0	1	0,0%	100,0%
Croatia	66	5	32	7,6%	48,5%
Cuba	12	3	11	25,0%	91,7%
Cyprus	1455	145	916	10,0%	63,0%
Denmark	459	9	171	2,0%	37,3%
Egypt	87	19	68	21,8%	78,2%
Equatorial Guinea	7	1	6	14,3%	85,7%
Estonia	136	8	80	5,9%	58,8%
Ethiopia	14	1	10	7,1%	71,4%
Faeroe Islands	11	2	9	18,2%	81,8%
Finland	170	4	77	2,4%	45,3%
France	112	1	47	0,9%	42,0%
Gabon	1	1	1	100,0%	100,0%
Georgia	13	2	12	15,4%	92,3%
Germany	647	17	242	2,6%	37,4%
Gibraltar	12	2	9	16,7%	75,0%
Greece	496	29	210	5,8%	42,3%
Guinea	1	0	0	0,0%	0,0%
Honduras	124	51	103	41,1%	83,1%
Hong Kong	101	5	55	5,0%	54,5%
Hungary	2	1	2	50,0%	100,0%
i iui igai y	2	0	4	0,0%	50,0%



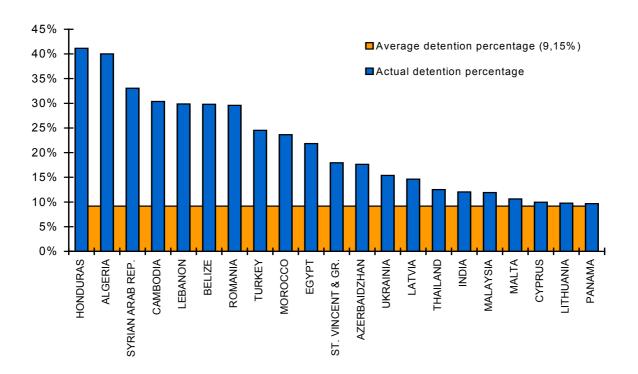
Flag state	Inspections	Detentions	Inspections with deficiencies	Detention-%	Inspection-% with deficiencies
lo di a			— ř -		
India	83 3	10	64 3	12,0%	77,1%
Indonesia		0		0,0%	100,0%
Iran	52	1	31	1,9%	59,6%
Ireland	71 29	1	40 3	1,4%	56,3%
Israel		0		0,0%	10,3%
Italy	229	18	117	7,9%	51,1%
Japan Karaa Damaaratia Banublia	34	0	11	0,0%	32,4%
Korea Democratic Republic	4	2	4	50,0%	100,0%
Korea, Republic of	36	0	17	0,0%	47,2%
Kuwait	18	3	13	16,7%	72,2%
Latvia	41	6	27	14,6%	65,9%
Lebanon	77	23	67	29,9%	87,0%
Liberia	933	38	419	4,1%	44,9%
Libyan Arab J.	37	10	29	27,0%	78,4%
Lithuania	123	12	84	9,8%	68,3%
Luxemburg	44	1	16	2,3%	36,4%
Malaysia	42	5	24	11,9%	57,1%
Malta	1571	167	937	10,6%	59,6%
Man, Isle of	140	7	55	5,0%	39,3%
Marshall Islands	112	3	48	2,7%	42,9%
Mauritius	10	1	6	10,0%	60,0%
Mexico	4	0	2	0,0%	50,0%
Morocco	55	13	45	23,6%	81,8%
Myanmar, Union of	6	0	3	0,0%	50,0%
Netherlands, the	788	23	338	2,9%	42,9%
Nigeria	2	1	2	50,0%	100,0%
Norway	939	30	426	3,2%	45,4%
Pakistan	10	2	9	20,0%	90,0%
Panama	1626	157	912	9,7%	56,1%
Philippines	105	7	58	6,7%	55,2%
Poland	118	6	53	5,1%	44,9%
Portugal	212	19	117	9,0%	55,2%
Qatar	17	2	11	11,8%	64,7%
Romania	71	21	56	29,6%	78,9%
Russian Federation	937	85	550	9,1%	58,7%
Sao Tome and Principe	5	2	5	40,0%	100,0%
Saudi Arabia	30	3	15	10,0%	50,0%
Singapore	224	9	89	4,0%	39,7%
Slovakia	1	0	0	0,0%	0,0%
South Africa	6	1	1	16,7%	16,7%
Spain	41	2	17	4,9%	41,5%
Sri Lanka	10	0	3	0,0%	30,0%
St Vincent & Grenadines	663	119	436	17,9%	65,8%
Sudan	2	1	2	50,0%	100,0%
Sweden	275	7	100	2,5%	36,4%
Switzerland	22	0	6	0,0%	27,3%
Syrian Arab Republic	124	41	112	33,1%	90,3%



Flag state	Inspections	Detentions	Inspections with deficiencies	Detention-%	Inspection-% with deficiencies
Taiwan	30	2	16	6,7%	53,3%
Thailand	56	7	43	12,5%	76,8%
Tunisia	23	2	19	8,7%	82,6%
Turkey	665	163	564	24,5%	84,8%
Turkmenistan	4	2	4	50,0%	100,0%
Tuvalu	24	1	16	4,2%	66,7%
U.S.A.	58	2	15	3,4%	25,9%
Ukrainia	286	44	214	15,4%	74,8%
United Arab Emirates	9	2	8	22,2%	88,9%
United Kingdom	185	6	68	3,2%	36,8%
Uruguay	1	0	0	0,0%	0,0%
Vanuatu	39	1	16	2,6%	41,0%
Totals and averages	18399	1684	10255	9,15%	55,7%

1999 detentions per Flag state, exceeding average percentage

- Only flags with more than 20 port State control inspections in 1999 are recorded in this table and the graph on the next page
- The light area at the bottom of the **graph** represents the 1999 average detention percentage (9,15%)

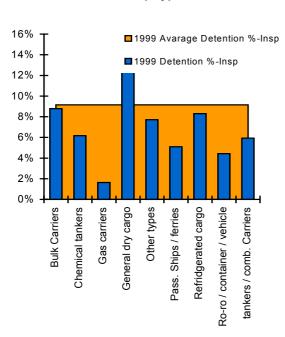


Flag	Inspections	Detentions	Detention %	Excess of average %
HONDURAS	124	51	41,13%	31,98%
ALGERIA	60	24	40,00%	30,85%
SYRIAN ARAB REPUBLIC	124	41	33,06%	23,91%
CAMBODIA	158	48	30,38%	21,23%
LEBANON	77	23	29,87%	20,72%
BELIZE	188	56	29,79%	20,64%
ROMANIA	71	21	29,58%	20,43%
TURKEY	665	163	24,51%	15,36%
MOROCCO	55	13	23,64%	14,49%
EGYPT	87	19	21,84%	12,69%
ST. VINCENT & GRENADINES	663	119	17,95%	8,80%
AZERBAIDZHAN	34	6	17,65%	8,50%
UKRAINIA	286	44	15,38%	6,23%
LATVIA	41	6	14,63%	5,48%
THAILAND	56	7	12,50%	3,35%
INDIA	83	10	12,05%	2,90%
MALAYSIA	42	5	11,90%	2,75%
MALTA	1571	167	10,63%	1,48%
CYPRUS	1455	145	9,97%	0,82%
LITHUANIA	123	12	9,76%	0,61%
PANAMA	1626	157	9,66%	0,51%

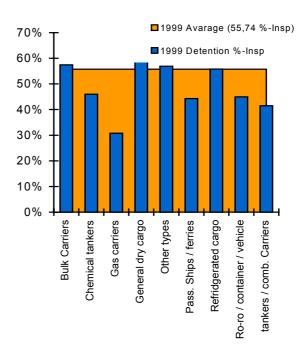


Inspections and detentions per ship type

1999 Detention % of Inspections per ship type



1999 % of Inspections with deficiencies



SHIP TYPE	Inspections	Inspections with deficiencies	% of inspections. with deficiencies	Individual ships	Detentions	Detention. %	+/- average detention %
5 11 0 1		_,	· /	— ··		_	. •
Bulk Carriers	5037	2894	57,45%	3361	442	8,78%	-0,37%
Chemical Tankers	891	410	46,02%	591	55	6,17%	-2,98%
Gas Carriers	244	75	30,74%	183	4	1,64%	-7,51%
General Dry Cargo	6363	4151	65,24%	3567	849	13,34%	4,19%
Other Types	441	251	56,92%	364	34	7,71%	-1,44%
Passengers Ships / Ferries	727	322	44,29%	400	37	5,09%	-4,06%
Refrigerated Cargo	842	470	55,82%	575	70	8,31%	-0,84%
Ro-Ro / Container / Vehicle	2370	1066	44,98%	1558	105	4,43%	-4,72%
Tankers / Comb. Carriers	1484	616	41,51%	1051	88	5,93%	-3,22%
All types	18399	10255	55,74%	11650	1684	9,15%	



Major categories of deficiencies in relation to inspections/ships

	NUMBER OF DEFICIENCIES		DEF. I	N % OF T NUMBER	_		o of def ections		ratio of def. to indiv. ships x 100			
	1997	1998	1999	1997	1998	1999	1997	1998	1999	1997	1998	1999
SHIPS' CERTIFICATES	2.803	3.204	3596	5,26%	5,54%	5,93%	16,67	18,16	19,54	26,15	28,69	31,97
CREW	1.452	1.404	1232	2,72%	2,43%	2,03%	8,64	7,96	6,70	13,55	12,57	10,95
ACCOMMODATION	2.183	1.931	1889	4,09%	3,34%	3,11%	12,98	10,94	10,27	20,37	17,29	16,79
FOOD AND CATERING	1.508	1.105	954	2,83%	1,91%	1,57%	8,97	6,26	5,19	14,07	9,89	8,48
WORKING SPACES	505	518	507	0,95%	0,90%	0,84%	3	2,94	2,76	4,71	4,64	4,51
LIFE SAVING APPLIANCES	10.263	10.445	10882	19,25%	18,06%	17,94%	61,04	59,2	59,14	95,75	93,53	96,75
FIRE FIGHTING APPLIANCES	7.500	7.749	8052	14,07%	13,40%	13,27%	44,61	43,92	43,76	69,97	69,39	71,59
ACCIDENT PREVENTION	911	1.008	1336	1,71%	1,74%	2,20%	5,42	5,71	7,26	8,5	9,03	11,88
SAFETY IN GENERAL	6.683	7.603	7965	12,54%	13,15%	13,13%	39,75	43,09	43,29	62,35	68,08	70,81
ALARM SIGNALS	240	267	292	0,45%	0,46%	0,48%	1,43	1,51	1,59	2,24	2,39	2,60
CARGO	408	813	722	0,77%	1,41%	1,19%	2,43	4,61	3,92	3,81	7,28	6,42
LOAD LINES	2.888	3.161	3308	5,42%	5,47%	5,45%	17,18	17,92	17,98	26,94	28,3	29,41
MOORING ARRANGMNTS.	401	552	603	0,75%	0,95%	0,99%	2,39	3,13	3,28	3,74	4,94	5,36
PROPULSION/AUX. MACHIN.	2.513	3.128	2966	4,71%	5,41%	4,89%	14,95	17,73	16,12	23,44	28,01	26,37
NAVIGATION	5.825	6.426	6643	10,93%	11,11%	10,95%	34,65	36,42	36,11	54,34	57,54	59,06
RADIO	1.902	2.112	2439	3,57%	3,65%	4,02%	11,31	11,97	13,26	17,74	18,91	21,68
MARPOL AN. I	4.017	4.112	4276	7,54%	7,11%	7,05%	23,89	23,31	23,24	37,48	36,82	38,02
DEF. SPECIFIC FOR TANKERS	143	190	151	0,27%	0,33%	0,25%	0,85	1,08	0,82	1,33	1,7	1,34
MARPOL AN. II	82	79	67	0,15%	0,14%	0,11%	0,49	0,45	0,36	0,76	0,71	0,60
OPERATIONAL DEF. SOLAS	723	831	975	1,36%	1,44%	1,61%	4,3	4,71	5,30	6,75	7,44	8,67
OPERATIONAL DEF. MARPOL	262	546	558	0,49%	0,94%	0,92%	1,56	3,09	3,03	2,44	4,89	4,96
MARPOL AN. III	15	46	36	0,03%	0,08%	0,06%	0,09	0,26	0,20	0,14	0,41	0,32
MARPOL AN. V		70	632		0,12%	1,04%		0,4	3,43		0,63	5,62
ISM		373	498		0,64%	0,82%		2,11	2,71		3,34	4,43
ALL OTHER DEFICIENCIES	41	68	41	0,08%	0,12%	0,07%	0,24	0,39	0,22	0,38	0,61	0,36
NOT CLEARLY HAZARDOUS	43	90	50	0,08%	0,16%	0,08%	0,26	0,51	0,27	0,4	0,81	0,44
TOTAL	53.311	57.831	60670									



Inspections with deficiencies

FLAGS	Inspections with de Inspections	Inspections with	Percentage with
FLAGS	1999	deficiencies	deficiencies
Albania	15	14	93,33%
Algeria	60	56	93,33%
Angola	1	1	100,00%
Antigua and Barbuda	884	483	54,64%
Antilles, Netherlands	100	53	53,00%
Austria	43	12	27,91%
Azerbaijan	34	28	82,35%
Bahamas	1101	591	53,68%
Bahrain	5	2	40,00%
Bangladesh	10	10	100,00%
Barbados	86	47	54,65%
Belgium	3	1	33,33%
Belize	188	161	85,64%
Bermuda	69	24	34,78%
Bolivia	10	10	100,00%
Brazil	19	11	57,89%
Bulgaria	111	73	65,77%
Cambodia	158	141	89,24%
Canada	7	7	100,00%
Cape Verde	11	10	90,91%
Cayman Islands	59	28	47,46%
Chile	2	1	50,00%
China People's Republic	132	62	46,97%
Colombia	1	1	100,00%
Croatia	66	32	48,48%
Cuba	12	11	91,67%
Cyprus	1455	916	62,96%
Denmark	459	171	37,25%
Egypt	87	68	78,16%
Equatorial Guinea	7	6	85,71%
Estonia	136	80	58,82%
Ethiopia	14	10	71,43%
Faeroe Islands	11	9	81,82%
Finland	170	77	45,29%
France	112	47	41,96%
Gabon	1	1	100,00%
Georgia	13	12	92,31%
Germany	647	242	37,40%
Gibraltar	12	9	75,00%
Greece	496	210	42,34%
Guinea	1	0	0,00%
Honduras	124	103	83,06%
Hong Kong	101	55	54,46%
Hungary	2	2	100,00%
Iceland	2	1	50,00%
India	83	64	77,11%
Indonesia	3	3	100,00%
Iran	52	31	59,62%
Ireland	71	40	56,34%
Israel	29	3	10,34%
Italy	229	117	51,09%
Japan	34	11	32,35%
Korea, Democratic Republic	4	4	100,00%



FLAGS	Inspections 1999	Inspections with deficiencies	Percentage with deficiencies
Korea, Republic of	36	17	47,22%
Kuwait	18	13	72,22%
Latvia	41	27	65,85%
Lebanon	77	67	87,01%
Liberia	933	419	44,91%
Libyan Arab J.	37	29	78,38%
Lithuania	123	84	68,29%
Luxemburg	44	16	36,36%
Malaysia	42	24	57,14%
Malta	1571	937	59,64%
Man, Isle of	140	55	39,29%
Marshall Islands	112	48	42,86%
Mauritius	10	6	60,00%
Mexico	4	2	50,00%
Morocco	55	45	81,82%
Myanmar, Union of	6	3	50,00%
Netherlands, the	788	338	42,89%
Nigeria	2	2	100,00%
Norway	939	426	45,37%
Pakistan	10	9	90,00%
Panama	1626	912	56,09%
Philippines	105	58	55,24%
Poland	118	53	44,92%
Portugal	212	117	55,19%
Qatar	17	11	64,71%
Romania	71	56	78,87%
Russian Federation	937	550	58,70%
Sao Tome and Principe	5	5	100,00%
Saudi Arabia	30	15	50,00%
Singapore	224	89	39,73%
Slovakia	1	0	0,00%
South Africa	6	1	16,67%
Spain	41	17	41,46%
Sri Lanka	10	3	30,00%
St Vincent & Grenadines	663	436	65,76%
Sudan	2	2	100,00%
Sweden	275	100	36,36%
Switzerland	22	6	27,27%
Syrian Arab Republic	124	112	90,32%
Taiwan	30	16	53,33%
Thailand	56	43	76,79%
Tunisia	23	19	82,61%
Turkey	665	564	84,81%
Turkmenistan	4	4	100,00%
Tuvalu	24	16	66,67%
U.S.A.	58	15	25,86%
Ukrainia	286	214	74,83%
United Arab Emirates	9	8	88,89%
United Kingdom	185	68	36,76%
Uruguay	1	0	0,00%
Vanuatu	39	16	41,03%
TOTAL	18399	10255	55,74%



Specification of most common deficiencies 1997-1999

SHIPS' CERTIFICATES	1997	1998	1999
Safety equipment certificate	378	400	433
Safety construction certificate	173	153	187
Passenger ship safety certificate	25	12	23
Radio safety certificate	359	347	718
Load lines certificate	153	182	202
Certificate of fitness (liquefied gas in bulk)	1	1	4
Certificate of fitness (chemicals in bulk)	16	16	13
IOPP-certificate/NLS-certificate	861	814	852
Minimum safe manning certificate	136	168	196
Tonnage certificate	53	49	55
Other	648	1.062	913
TOTAL	3.204	3.596	3596
CREW	1997	1998	1999
Certificate of competency	810	835	670
Number/composition of crew	276	222	251
Medical certificate	262	227	213
Other	104	120	98
TOTAL	1.452	1.404	1232
ACCOMMODATION	1997	1998	1999
Cleanliness accommodation/parasites	274	272	265
Ventilation/heating	97	78	75
Sanitary facilities	521	483	440
Drainage	23	36	25
Lighting	211	154	167
Pipes/wires/insulation	30	17	28
Sick bay	206	151	144
Medical equipment	530	488	522
Other	291	252	223
TOTAL	2.183	1.931	1889
FOOD AND CATERING	1997	1998	1999
Galley/handling spaces	955	705	625
Provisions	324	223	187
Fresh water/piping/tanks	84	63	36
Other	145	114	106
TOTAL	1.508	1.105	954
WORKING SPACES	1997	1998	1999
Ventilation heating work. spaces	31	34	36
Lighting - working spaces	311	338	354
Others	163	146	117
TOTAL	505	518	507



LIFE SAVING APPLIANCES	1997	1998	1999
Life boats	1580	1759	1674
Life boat inventory	1047	936	935
Rescue boats	185	200	249
Rescue boat inventory	94	94	109
Life rafts	831	849	815
Launching/embarkation/stowage arrangements for boats/rafts	1771	1867	1975
Distress signals/pyrotechnics	305	314	298
Life buoys	1615	1726	1899
Life jackets/immersion suits/thermal protective aids	1029	1007	1009
Radio equipment for survival craft/EPIRB's	315	391	570
Line throwing apparatus	278	290	253
Training/instruction manual/record of inspection/maintenance	540	584	697
Other	673	428	399
TOTAL	10.263	10.445	10882

FIRE FIGHTING APPLIANCES	1997	1998	1999
Prevention	377	533	570
Inert gas system	16	32	34
Detection	205	292	302
Fire fighting equipment	1055	1214	1203
Fixed fire extinguishing installation	929	943	878
Appliances (general equipment)	1037	871	1039
Personal equipment	682	609	657
Pumps	616	646	625
Fire dampers/valves/quick dosing devices/remote control	2209	2210	2247
International shore connection	57	84	83
Other	317	315	414
TOTAL	7.500	7.749	8052

ACCIDENT PREVENTION	1997	1998	1999
Personal equipment	107	132	157
Protection machines/machinery part	330	341	386
Pipes/wires/insulation	174	186	202
Other	300	349	591
TOTAL	911	1.008	1336

SAFETY IN GENERAL



1998

1997

1999

e, , e			
Dosing devices/watertight doors	309	293	420
Signs/indications	668	1024	1145
Safety plan	405	453	501
Musters and drills	266	382	432
Stability/strength	110	92	133
Construction decks/beams/hull/bulkheads	757	933	1056
Steering gear	350	371	356
Hull damage impairing seaworthiness	192	189	158
Ballast tanks/fuel tanks/other tanks	224	243	227
Emergency lighting/batteries/switches	590	669	616
Electrical equipment in general	715	768	794
Pilot ladders	269	267	226
Gangway/accommodation ladders	429	462	459
Means of escape	384	417	354
Other	1015	1040	1088
TOTAL	6.683	7.603	7965
ALARM SIGNALS	1997	1998	1999
General alarm	42	74	65
Fire alarm	60	55	62
Other	138	138	165
TOTAL	240	267	292
CARGO	1997	1998	1999
Stowage	45	71	73
Grain	29	58	41
Dangerous goods	93	93	65
Loading and unloading equipment	152	162	167
Holds and tanks	60	71	84
Cargo securing manual	-	246	208
Other	29	112	84
TOTAL	408	813	722

LOAD LINES	1997	1998	1999
Overloading	33	40	27
Freeboard marks	361	356	375
Railings/catwalks	271	300	257
Cargo hatchways/other hatchways	241	294	316
Portable/non-portable hatchway covers (beams/tarpaulins etc.)	295	299	393
Windows/side scuttles	238	234	207
Doors	427	433	535
Ventilators/air pipes/casings	621	714	662
Other	401	491	536
TOTAL	2.888	3.161	3308



MOORING ARRANGEMENTS	1997	1998	1999
Ropes/wires	72	118	199
Anchoring devices	136	210	174
Winches/capstans	86	100	95
Other	107	124	135
TOTAL	401	552	603

PROPULSION AND AUXILIARY MACHINERY	1997	1998	1999
Propulsion/main engines	299	409	380
Cleanliness of engine room	966	1128	1023
Auxiliary machinery	412	604	674
Bilge pumping arrangements	104	120	120
Guards/fencing	174	173	137
Insulation	75	88	62
Other	483	606	570
TOTAL	2.513	3.128	2966

NAVIGATION	1997	1998	1999
Navigational equipment	358	413	455
Radar	255	284	284
Gyro compass	176	163	204
Magnetic compass	581	772	905
Lights/shapes/sounds/signals	742	652	632
Signalling lamp	145	169	166
Nautical charts	1264	1356	1430
Nautical publications	2052	2270	2134
Other	252	347	433
TOTAL	5.825	6.426	6643

RADIO	1997	1998	1999
Auto alarm/2182 kHz watch receiver	153	113	33
Main installation	214	201	104
Reserve installation	208	237	332
VHF installation	80	129	146
Direction finder	80	82	92
EPIRB's/radar transponder	675	705	748
Other	492	645	984
TOTAL	1.902	2.112	2439

TOTAL

Annual Report 1999



MARINE POLLUTION – ANNEX I	1997	1998	1999
MARPOL SOPEP	206	467	666
Oil record book	1774	1530	1506
Retention of oil on board	545	466	385
Oily water separating equipment	534	619	729
Oil discharge monitor and control system	236	240	222
15 ppm alarm arrangements	218	249	275
Standard discharge connection	44	35	39
Pollution report – annex I	19	25	21
Other	441	481	433
TOTAL	4.017	4.112	4276
DEFICIENCIES SPECIFIC FOR TANKERS	1997	1998	1999
Pump rooms/cargo handling spaces	18	11	26
Cargo transfer	15	18	25
instrumentation	21	44	15
Fire protection cargo deck area	4	4	10
Personal protection	14	18	18
Other	71	95	57
TOTAL	143	190	151
MARINE POLLUTION – ANNEX II	1997	1998	1999
Cargo record book	28	22	20
P + A manual	19	18	7
Efficient stripping	2	1	5
Residue discharge systems	3	5	1
Ventilation procedures/equipment	4	1	6
Ship type designation – annex II	3	0	
Pollution report – annex II	0	1	2
Other	23	31	26
TOTAL	82	79	67
OPERATIONAL CONTROL SOLAS	1997	1998	1999
Musters/drills/communication	269	316	352
Fire/damage control plan	177	185	220
Bridge/engine room/cargo operations	57	84	76
Manuals/instructions/etc.	162	190	295
Other	58	56	32
TOTAL	723	831	975
OPERATIONAL CONTROL MARROL	4005	4000	1000
OPERATIONAL CONTROL MARPOL	1997	1998	1999
Oil/oily mixtures in machinery spaces	85	102	106
garbage	138	381	382
Other	39	63	70
	-		

558

262

546



MARINE POLLUTION – ANNEX III	1997	1998	1999
Marine pollution – annex III	15	46	36
TOTAL	15	46	36
MARINE POLLUTION – ANNEX V	1997	1998	1999
Marine pollution – annex V	-	70	632
TOTAL	-	70	632
ISM	1997	1998	1999
ISM	1991	373	498
TOTAL	-	373	498
ALL OTHER DEFICIENCIES	1997	1998	1999
All other deficiencies	41	68	41
TOTAL	41	68	41
OTHER DEFICENCIES, NOT CLEARLY HAZARDOUS	1997	1998	1999
Other deficiencies, not clearly hazardous	43	90	50
TOTAL	43	90	50
TOTAL DEFICIENCIES	53.311	57.831	60.670



Model 1 - Detentions with class related detainable deficiencies in % of total number of detentions (per classification society)

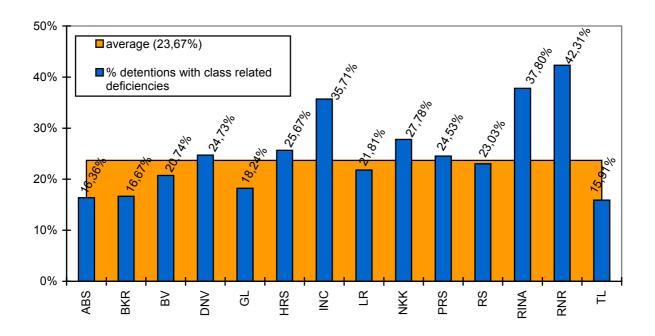
Classification Society	Total number of detentions	Detentions with class related deficiencies	Number of individual ships	Percentage Detentions with class related deficiencies	+/- Percentage Average
NO CLASS RECORDED	155	30	137	19,35 %	-4,31 %
CLASS WITHDRAWN	70	17	66	24,29 %	0,62 %
CLASS NOT SPECIFIED	30	7	22	23,33 %	-0,34 %
AMERICAN BUREAU OF SHIPPING	110	18	100	16,36 %	-7,31 %
BIRO KLASIFIKASI INDONESIA	0		0		
BULGARSKI KORABEN REGISTAR	12	2	12	16,67 %	-7,00 %
BUREAU VERITAS (FRANCE)	217	45	198	20,74 %	-2,93 %
CESKOSLOVENSKY LODIN REGISTER (CZECHOSL.)	2	0	2	0,00 %	-23,67 %
CHINA CLASSIFICATION SOCIETY (CCS)	4	4	4	100,00 %	76,33 %
CHINA CORPORATION REGISTER OF SHIPPING	1	0	1	0,00 %	-23,67 %
CROATIAN REGISTER OF SHIPPING (CROATIA)	6	3	3	50,00 %	26,33 %
DET NORSKE VERITAS (NORWAY)	93	23	90	24,73 %	1,06 %
GERMANISCHER LLOYD (GERMANY)	159	29	144	18,24 %	-5,43 %
HELLENIC REGISTER OF SHIPPING (GREECE)	74	19	60	25,68 %	2,01 %
HONDURAS INTER. NAVAL SURVE. AND INSP. BUR.	5	3	5	60,00 %	36,33 %
INCLAMAR (CYPRUS)	14	5	11	35,71 %	12,05 %
INDIAN REGISTER OF SHIPPING (INDIA)	3	1	3	33,33 %	9,66 %
INTERNATIONAL NAVAL SURVEYS BUREAU (INSB)	10	3	7	30,00 %	6,33 %
KOREAN REGISTER OF SHIPPING (SOUTH KOREA)	9	3	8	33,33 %	9,66 %
LLOYD'S REGISTER OF SHIPPING (U.K.)	243	53	217	21,81 %	-1,86 %
NATIONAL SHIPPING ADJUSTERS INC	0		0		
NIPPON KAIJI KYOKAI (JAPAN)	72	20	69	27,78 %	4,11 %
NV UNITAS (BELGIUM)	0		0		
PANAMA BUREAU OF SHIPPING (PANAMA)	3	1	3	33,33 %	9,66 %
PANAMA MARITIME SURVEYORS BUREAU INC	4	3	3	75,00 %	51,33 %
PANAMA REGISTER CORP (PANAMA)	1	1	1	100,00 %	76,33 %
POLSKI REJESTR STATKOW (POLAND)	53	13	44	24,53 %	0,86 %
REGISTER OF SHIPPING (RUSSIAN FED.)	178	41	166	23,03 %	-0,63 %
REGISTER OF SHIPPING PEOPLE'S R.C. (CHINA)	0		0		
REGISTRI LAKNORI SHQIPTAR (ICELAND)	0		0		
REGISTRO CUBANO DE BUQUES (CUBA)	1	1	1	100,00 %	76,33 %
REGISTRO INTERNACIONAL NAVALE (PORTUGAL)	7	4	5	57,14 %	33,47 %
REGISTRO ITALIANO NAVALE (ITALY)	82	31	72	37,80 %	14,14 %
REGISTROL NAVAL ROMAN (ROMANIA)	26	11	22	42,31 %	18,64 %
REJNOJ REGISTER RSFSR	0		0		
SOCIEDAD DE REGISTRO/CLASS/MEXICANA SA	2	2	2	100,00 %	76,33 %
TURKU LLOYD VAKFI (TURKEY)	44	7	37	15,91 %	-7,76 %
VIETNAM REGISTER OF SHIPPING (VIETNAM)	0		0		

^{*)} The information contained in the statistical material of Models 1-4 concerning classification societies were collected during the calendar year 1999 on the basis of provisional criteria for the assessment of class responsibility. Due to updating anomalies the figures may include a small margin of error. This margin is not greater than 3 percent to either side.



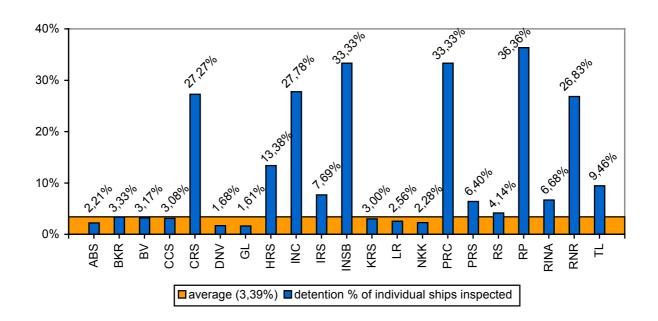
Model 1 - Detentions with class related detainable deficiencies in % of total number of detentions (per Classification Society)

(Cases in which more than 10 detentions are involved, see table on previous page)



Model 2 – Detentions of ships with class related detainable deficiencies per Classification Society

(Cases in which more than 10 inspections are involved, see table on next page)





Model 2 – Detentions of ships with class related detainable deficiencies per Classification Society (Cases in which more than 10 inspections are involved)

Classification Society	Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percentage of Average	Detention-% of individual ships inspected	+/- Percentage of Average
NO CLASS RECORDED	813	596	30	3,69 %	1,58 %	5,03 %	1,64 %
CLASS WITHDRAWN	289	215	17	5,88 %	3,77 %	7,91 %	
CLASS NOT SPECIFIED	78	51	7	8,97 %	6,87 %	13,73 %	10,33 %
AMERICAN BUREAU OF SHIPPING	1203	813	18	1,50 %	-0,61 %	2,21 %	-1,18 %
BULGARSKI KORABEN REGISTAR	110	60	2	1,82 %	-0,29 %	3,33 %	-0,06 %
BUREAU VERITAS (FRANCE)	2353	1418	45	1,91 %	-0,20 %	3,17 %	-0,22 %
CHINA CLASSIFICATION SOCIETY (CCS)	175	130	4	2,29 %	0,18 %	3,08 %	-0,31 %
CHINA CORPORATION REGISTER OF SHIPPING	17	12	-0	0,00 %	-2,11 %	0,00 %	-3,39 %
CROATIAN REGISTER OF SHIPPING (CROATIA)	25	11	3	12,00 %	9,89 %	27,27 %	23,88 %
DET NORSKE VERITAS (NORWAY)	2090	1371	23	1,10 %	-1,01 %	1,68 %	-1,71 %
GERMANISCHER LLOYD (GERMANY)	3278	1803	29	0,88 %	-1,22 %	1,61 %	-1,78 %
HELLENIC REGISTER OF SHIPPING (GREECE)	260	142	19	7,31 %	5,20 %	13,38 %	9,99 %
INCLAMAR (CYPRUS)	30	18	5	16,67 %	14,56 %	27,78 %	24,39 %
INDIAN REGISTER OF SHIPPING (INDIA)	25	13	1	4,00 %	1,89 %	7,69 %	4,30 %
INTERNATIONAL NAVAL SURVEYS BUREAU (INSB)	20	9	3	15,00 %	12,89 %	33,33 %	29,94 %
KOREAN REGISTER OF SHIPPING (SOUTH KOREA)	138	100	3	2,17 %	0,06 %	3,00 %	-0,39 %
LLOYD'S REGISTER OF SHIPPING (U.K.)	3271	2067	53	1,62 %	-0,49 %	2,56 %	-0,83 %
NIPPON KAIJI KYOKAI (JAPAN)	1222	877	20	1,64 %	-0,47 %	2,28 %	-1,11 %
PANAMA REGISTER CORP (PANAMA)	10	3	1	10,00 %	7,89 %	33,33 %	29,94 %
POLSKI REJESTR STATKOW (POLAND)	358	203	13	3,63 %	1,52 %	6,40 %	3,01 %
REGISTER OF SHIPPING (RUSSIAN FED.)	1706	991	41	2,40 %	0,29 %	4,14 %	0,75 %
REGISTRO INTERNACIONAL NAVALE (PORTUGAL)	32	11	4	12,50 %	10,39 %	36,36 %	32,97 %
REGISTRO ITALIANO NAVALE (ITALY)	778	464	31	3,98 %	1,88 %	6,68 %	3,29 %
REGISTROL NAVAL ROMAN (ROMANIA)	69	41	11	15,94 %	13,83 %	26,83 %	23,44 %
REJNOJ REGISTER RSFSR	11	9					
TURKU LLOYD VAKFI (TURKEY)	131	74	7	5,34 %	3,23 %	9,46 %	6,07 %



Model 3 – Number of detentions per Classification Society (individual ships with class related detainable deficiencies)

Number of ships with class related detainable deficiencies 1

Oleveiffication Ocaleta	detainable deficiencies, ¹			
Classification Society	detained once	detained <i>twice</i>		
NO CLASS RECORDED	28	1		
CLASS WITHDRAWN	15	1		
CLASS NOT SPECIFIED	3	2		
AMERICAN BUREAU OF SHIPPING	16	1		
BULGARSKI KORABEN REGISTAR	2	-		
BUREAU VERITAS (FRANCE)	43	1		
CESKOSLOVENSKY LODIN REGISTER (CZECHOSL.)	-	-		
CHINA CLASSIFICATION SOCIETY (CCS)	4	-		
CHINA CORPORATION REGISTER OF SHIPPING	-	-		
CROATIAN REGISTER OF SHIPPING (CROATIA)	3	-		
DET NORSKE VERITAS (NORWAY)	21	1		
GERMANISCHER LLOYD (GERMANY)	27	1		
HELLENIC REGISTER OF SHIPPING (GREECE)	13	3		
HONDURAS INTER. NAVAL SURVE. AND INSP. BUR.	3	-		
INCLAMAR (CYPRUS)	3	1		
INDIAN REGISTER OF SHIPPING (INDIA)	1	-		
INTERNATIONAL NAVAL SURVEYS BUREAU (INSB)	3	-		
KOREAN REGISTER OF SHIPPING (SOUTH KOREA)	3	-		
LLOYD'S REGISTER OF SHIPPING (U.K.)	49	2		
NIPPON KAIJI KYOKAI (JAPAN)	20	-		
PANAMA BUREAU OF SHIPPING (PANAMA)	1	-		
PANAMA MARITIME SURVEYORS BUREAU INC	1	1		
PANAMA REGISTER CORP (PANAMA)	1	-		
POLSKI REJESTR STATKOW (POLAND)	13	-		
REGISTER OF SHIPPING (RUSSIAN FED.)	41	-		
REGISTRO CUBANO DE BUQUES (CUBA)	1	-		
REGISTRO INTERNACIONAL NAVALE (PORTUGAL)	4	-		
REGISTRO ITALIANO NAVALE (ITALY)	29	1		
REGISTROL NAVAL ROMAN (ROMANIA)	9	1		
SOCIEDAD DE REGISTRO/CLASS/MEXICANA SA	2	-		
TURKU LLOYD VAKFI (TURKEY)	7	-		

 $^{^{1}}$ No ship has been detained more than 2 times in 1999



Model 4 – Detentions of ships with class related detainable deficiencies per flag state

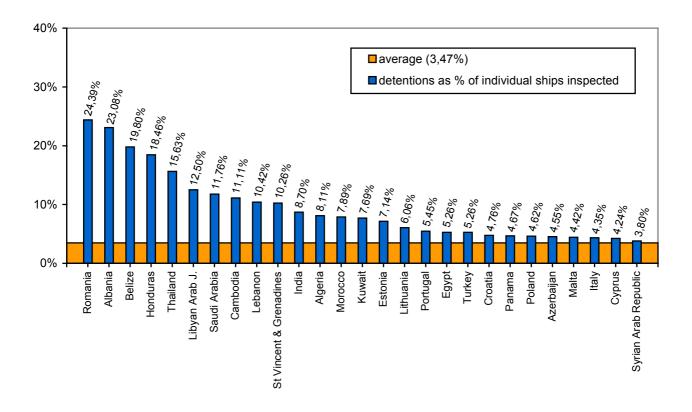
Flag state	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Albania	13	3	23,08 %	19,60 %
Algeria	37	3	8,11 %	4,64 %
Angola	1	1	100,00 %	96,53 %
Antigua and Barbuda	462	7	1,52 %	-1,96 %
Antilles, Netherlands	62	0	0,00 %	-3,47 %
Austria	22			
Azerbaijan	22	1	4,55 %	1,07 %
Bahamas	673	17	2,53 %	-0,95 %
Bahrain	3			
Bangladesh	5			
Barbados	47	0	0,00 %	-3,47 %
Belgium	3			
Belize	101	20	19,80 %	16,33 %
Bermuda	54	0	0,00 %	-3,47 %
Bolivia	8	2	25,00 %	21,53 %
Brazil	10	0	0,00 %	-3,47 %
Bulgaria	60	1	1,67 %	-1,81 %
Cambodia	90	10	11,11 %	7,64 %
Canada	7	0	0,00 %	-3,47 %
Cape Verde	5	2	40,00 %	36,53 %
Cayman Islands	45	1	2,22 %	-1,25 %
Chile	2			
China People's Rep.	102	3	2,94 %	-0,53 %
Colombia	1			
Croatia	42	2	4,76 %	1,29 %
Cuba	6	2	33,33 %	29,86 %
Cyprus	849	36	4,24 %	0,77 %
Denmark	309	0	0,00 %	-3,47 %
Egypt	57	3	5,26 %	1,79 %
Equatorial Guinea	7	0	0,00 %	-3,47 %
Estonia	70	5	7,14 %	3,67 %
Ethiopia	6	1	16,67 %	13,19 %
Faeroe Islands	6	2	33,33 %	29,86 %
Finland	101	0	0,00 %	-3,47 %
France	80	0	0,00 %	-3,47 %
Gabon	1	1	100,00 %	96,53 %
Georgia	10	0	0,00 %	-3,47 %
Germany	413	0	0,00 %	-3,47 %
Gibraltar	10	1	10,00 %	6,53 %
Greece	347	9	2,59 %	-0,88 %
Guinea	1			
Honduras	65	12	18,46 %	14,99 %
Hong Kong	75	0	0,00 %	-3,47 %
-	1	0	0,00 %	-3,47 %



Flag state	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Iceland	2			
India	46	4	8,70 %	5,22 %
Indonesia	3			
Iran	37	0	0,00 %	-3,47 %
Ireland	36	0	0,00 %	-3,47 %
Israel	16			
Italy	161	7	4,35 %	0,88 %
Japan	27			
Korea, Democratic Rep.	4	0	0,00 %	-3,47 %
Korea, Republic of	28	0	0,00 %	-3,47 %
Kuwait	13	1	7,69 %	4,22 %
Latvia	23	0	0,00 %	-3,47 %
Lebanon	48	5	10,42 %	6,94 %
Liberia	679	8	1,18 %	-2,29 %
Libyan Arab J.	16	2	12,50 %	9,03 %
Lithuania	66	4	6,06 %	2,59 %
Luxemburg	26	0	0,00 %	-3,47 %
Malaysia	32	1	3,13 %	-0,35 %
Malta	950	42	4,42 %	0,95 %
Man, Isle of	94	1	1,06 %	-2,41 %
Marshall Islands	94 76	0	0,00 %	-3,47 %
Mauritius	6	0	0,00 %	-3,47 %
Mexico	4	U	0,00 /6	-3,47 /0
Morocco	38	3	7,89 %	4,42 %
	4	3	7,09 70	4,42 70
Myanmar, Union of Netherlands, the		0	0.40.0/	2.04.0/
•	468	2	0,43 %	-3,04 %
Nigeria	2	0	0,00 %	-3,47 %
Norway	596	7	1,17 %	-2,30 %
Pakistan	4	0	0,00 %	-3,47 %
Panama	1113	52	4,67 %	1,20 %
Philippines	71	1	1,41 %	-2,06 %
Poland	65	3	4,62 %	1,14 %
Portugal	110	6	5,45 %	1,98 %
Qatar	11	0	0,00 %	-3,47 %
Romania	41	10	24,39 %	20,92 %
Russian Federation	596	20	3,36 %	-0,12 %
Sao Tome and Principe	3	0	0,00 %	-3,47 %
Saudi Arabia	17	2	11,76 %	8,29 %
Singapore	166	2	1,20 %	-2,27 %
Slovakia	1			
South Africa	4	0	0,00 %	-3,47 %
Spain	33	0	0,00 %	-3,47 %
Sri Lanka	6			
St Vincent & Grenadines	351	36	10,26 %	6,78 %
Sudan	2	0	0,00 %	-3,47 %
Sweden	176	1	0,57 %	-2,90 %
Switzerland	13			



Flag state	Number of individual ships inspected (Number of ships detained ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Syrian Arab Republic	79	3	3,80 %	0,33 %
Taiwan	18	0	0,00 %	-3,47 %
Thailand	32	5	15,63 %	12,15 %
Tunisia	12	0	0,00 %	-3,47 %
Turkey	380	20	5,26 %	1,79 %
Turkmenistan	3	0	0,00 %	-3,47 %
Tuvalu	11	0	0,00 %	-3,47 %
U.S.A.	44	0	0,00 %	-3,47 %
Ukrainia	189	6	3,17 %	-0,30 %
United Arab Emirates	7	1	14,29 %	10,81 %
United Kingdom	138	0	0,00 %	-3,47 %
Uruguay	1			
Vanuatu	31	0	0,00 %	-3,47 %



Model 4 – Detentions of ships with class related detainable deficiencies per flag state above average (cases in which more than 10 individual ships are inspected)



Explanatory note – Black, Grey and White lists

The new normative listing of flag States provides an independent categorization that has been prepared on the basis of Paris MOU port State inspection results. 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.

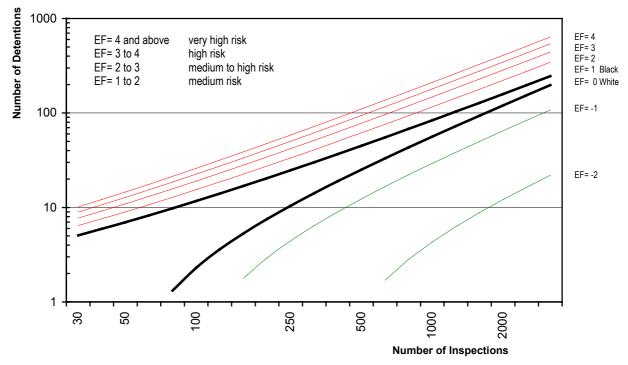
The performance of each flag State is calculated using a standard formula for statistical calculations in which certain values have been fixed in accordance with agreed Paris MOU policy. Two limits have been included in the new system, the 'black to grey' and the 'grey to white' limit, each with its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

$$\begin{split} u_{black_to_grey} &= N \cdot p + 0.5 + z \sqrt{(N \cdot p \cdot (1-p))} \\ u_{white_to_grey} &= N \cdot p - 0.5 - z \sqrt{(N \cdot p \cdot (1-p))} \end{split}$$

In the formula "N" is the number of inspections, "p" is the allowable detention limit (yardstick), set to 7% by the Paris 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.

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. A more detailed article is available at 'www.parismou.org/AnnRep.html'





Secretariat Paris Memorandum of Understanding on Port State Control



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Paris MOU fact sheet – organizational structure

