

# Annual Report 2002

The Paris Memorandum of Understanding on Port State Control





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### 1. Executive summary

The 20th anniversary of the Paris Memorandum was marked by a number of events that will determine action for the years ahead. Two major inspection campaigns identified much room for improvement of issuing STCW certificates and implementation of the ISM Code. New amendments to the memorandum give more muscle to enforcement, including the introduction of 'three strikes and out' for substandard ships. The sinking of the oil tanker Prestige and the resulting oil disaster underline the need for more strict port State control actions.

All these events have a strong correlation and confirm concerns expressed in previous reports. A minority of rogue ship owners still manage to escape the net of control measures and continue to give the shipping industry a bad name.

Old ships registered under "fly-by-night" flags, surveyed by shady classification societies, manned by poorly certified seafarers and operated in defiance of all safety management principles pose an unacceptable risk to human life and the environment.

It is difficult to comprehend that banks, insurers and charterers alike still continue to do business with such operators.

With the introduction of more selective targeting, expanded inspections and new banning provisions, the Paris MOU is moving towards a "zero-tolerance" policy.

For the future ship owners that register ships under flags on the black list may find that it is more profitable to operate under quality flags or have their ships scrapped. Several flags on the black list have now taken positive measures to improve their record. A sign that the determined action of port State control can make a difference.



Despite warnings, some flags have managed to achieve new records in poor performance. Newcomers like Sao Tome and Principe and Tonga compete against each other for 3rd place on the black list.

Last year's observation that classification societies should be more discriminating in which flags they represent, was substantiated in 2002, when 78% of the class related detentions took place on ships flying a flag on the black list.

Despite some initial criticism of this observation, a few more prominent societies are now reconsidering their association with these flags.

In 2002 classification societies were held responsible in 312 cases where class related detainable deficiencies were found, which is 20% of the total of 1,577 detentions. This is an improvement on the figure of 22% in 2001.

The total number of inspections increased substantially in 2002 and is 5.8% higher when compared with last year. The most positive trend can be observed in detentions which have decreased for the 2nd year in a row and now constitute 7.98% of total inspections.

The enhanced method of targeting is paying off and resources are allocated where needed. This is also supported by the fact that 67% of detentions took place on ships flying a black listed flag.

The number of deficiencies recorded during port State control inspections in 2002, 69,079, showed another slight increase of 1.0% when compared with last year.

Last year's concern on ISM related deficiencies has been confirmed by the Concentrated Inspection Campaign carried out in 2002.

Despite the fact that several ship types have had management systems in operation for a number of years, and other ship types have recently received certificates, 3210 non-conformities were found, a rise of 260% compared with last year. It is questionable as to how some newly ISM compliant ships in particular have managed to get certified over the past year, since 75% (1185) of the total number of detentions take place on these ships.

Ships older than 15 years show 12 times as many nonconformities as ships less than 5 year old.



# 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 8 were active in 2002, 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 Paris MOU members and observers are represented. The evaluation of the TEG is submitted to the Committee for final consideration and decision making.

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 between meetings of the Committee. The board meets several times a year and in 2002 was composed of



participants from Denmark, Italy, Norway, Poland, the United Kingdom and the European Commission.

#### **Port State Control Committee**

The Port State Control Committee (PSCC) held its 35th meeting in Halifax, Canada on 6-9 May 2002.

The Committee revealed that a recent inspection campaign on crew certification has shown that around a third of ships did not comply with new requirements. During two months of checks on over 2400 ships, inspectors found that on 853 of them at least one of the crew did not have the correct STCW95 certification. In a major review of the Memorandum, the Committee agreed on new banning procedures which could result in 'three strikes and out' for many sub-standard ships, or 'two strikes and out' for the worst.

Another addition is the International Labour Organisation's Protocol to ILO 147 which covers checking of new requirements for seafarers hours of work and rest. These new provisions will enter into force on 22 July 2003. The trial of a detention review panel will continue. Under the scheme flag States and classification societies are able to ask for disputed detention cases to be reviewed by the MOU Secretariat and a group of member States. In 2001 and 2002 4 cases were reviewed and the decision of the port State revised in 3.

In the drive to improve transparency in the industry member States also agreed to extend their policy on publishing detentions to ensure that details are put on the MOU website and EQUASIS as soon as a ship is put under detention.

The meeting confirmed its intention to carry out a 3-month concentrated inspection campaign (CIC) on the International Safety Management Code (ISM) from 1 July 2002 when all ships will be required to have safety management systems in place.

A comprehensive package of expert and specialised training featuring the human element and safety and environment aspects was agreed with the first course starting in the fall of 2002.

Latvia was welcomed as the latest co-operating member of the MOU with the hope that they can achieve full membership over the next few years.



#### **Technical Evaluation Group**

The Technical Evaluation Group (TEG) convened twice during 2002. Several task forces submitted reports to the TEG for evaluation before submission to the Port State Control Committee.

Issues considered by TEG included:

- development of a new SIReNaC information system
- preparations for a Concentrated Inspection Campaign on ISM implementation in 2002
- preparations for a Concentrated Inspection Campaign on operational safety of passenger ships in 2003
- new guidelines for refusing ships access to MOU ports
- improvement of the reporting system for PSC inspections, including recording of charterers
- development of a Paris MOU reward system
- evaluation of statistics
- enforcement of the human element related to working and resting hours on board
- development of a new software system to check requirements for ships

#### **Port State Control Seminars**

#### 34th PSC Seminar

The 34th Port State Control Seminar of the Paris MOU was held in Gdynia, Poland on 18-20 June 2002. The Seminar was attended by Port State Control Officers from the Paris MOU, as well as participants from Estonia, Latvia, Lithuania, Slovenia and the Viña del Mar Agreement, Tokyo MOU, DSI and Israel.

The seminar covered the latest developments in the Paris MOU, fixed fire extinguishing installations and the revision of SOLAS Ch II-2. Furthermore the PSCOs were familiarised with the SIReNaC2000 database system.

#### 35th PSC Seminar

The 35th PSC Seminar was held on 21-24 October 2002, in Helsinki, Finland. It was attended by Port State Control Officers from the Paris MOU, as well as participants from the Tokyo MOU, Estonia, Latvia, Lithuania, Slovenia and EC.

Participants were informed about the latest developments regarding PSC from the EU. The seminar was dedicated to operational controls onboard passenger ships in preparation for the Concentrated Inspection Campaign which is scheduled to take place from 1st of May until 31st of July 2003.

#### **New Information System**

Fast developing database and internet technology have made it necessary to replace the current version of the SIReNaC F information system, which has been in operation since 1998. The new system will also take account of amendments in port State control policy such as targeting of ships, new inspection procedures and measuring performance of classification societies. It will be designed by the French Departement des Systèmes d'Information (DSI). The new system will make full use of internet technology and an ORACLE database architecture. In the future Port State Control Officers will be able to access the system for interrogation and updating by means of portable PC's and cellular phones. It will also provide more accurate descriptions of inspection results and include a range of new data.

A Task Force was instructed to oversee the development of the new system which will become operational in January 2003.

#### Paris MOU on the Internet

The Paris MOU Internet site has continued to enjoy an increasing demand from a variety of visitors. In particular from flag and port States, government agencies, charterers, insurers and classification societies who are able to monitor their performance and the performance of others on a continuous basis.

In 2002 new information was added on the site. This includes:

- Appeal procedures of the MOU members, which the owner is entitled to in case of detention.
- Guidance for flag States and classification societies on obtaining review of a detention.
- A calculator to establish the target factor for a particular ship.
- · Ships which have been banned from the region in 2002

The regular publication of the "Rustbucket" has highlighted particularly serious detentions. These are described in detail and supported with photographs to make the general public aware of unsafe ships that have been caught by port State control. During 2002 the flow of new cases appeared to dry up. The only "ships of shame" were the m/v ISPARTA (detained by Italy) and m/v RAMAZ (detained by Spain). By offering an annual award for the best contribution to the "Rustbucket" it is expected that more serious cases will find their way to the web site.

Other information of interest such as the monthly list of detentions, the annual report, the statistics of the "Blue Book" and news items can be downloaded from the website, which can be found at "www.parismou.org".



### 3. Looking at 2003

Although the overall situation appears to be improving slightly in terms of detentions, port State control results for 2002 indicate that efforts need to be enhanced to obtain a substantial reduction in the number of substandard ships visiting the region.

Actions agreed by the Committee during its 35th session (2002) and 36th session (2003) are in the process of being implemented.

#### **Concentrated Inspection Campaign**

A number of recent incidents on passenger ships together with longer term statistics have underlined the need for strict compliance with operational standards on board ship. New guidelines have been adopted by the Committee and will provide a useful tool to establish whether the crew is able to respond effectively to emergency situations on large passenger ships. The CIC for Operational Safety on passenger ships will start in May 2003 for a period of 3 months.

#### Performance of classification societies

The Committee has monitored closely the performance of classification societies. The 2001 edition of the Blue Book included a table covering 3 years of performance for the first time. The targeting system (target factor) will take account of this table, as well as looking at whether the society is recognised by the European Union. The Committee will also be considering a proposal to issue tables showing the performance of classification societies when acting for flag States.

#### **Ships of Quality**

The Committee has made considerable progress with the development of a reward system for ships that have a good safety and port State control history. Criteria for award will take account of:

- the flag of the ship, which should appear on the White List;
- whether an IMO self assessment form has been submitted to the MOU;
- the performance record of its classification society;
- the PSC history of the ship.

The potential reward for operators of quality ships is a reduction in the inspection burden, which at the same time will enable port State control Authorities to direct their resources more effectively.

#### **Review Panel**

The Review Panel will become a permanent feature during 2003. Flag States or classification societies that cannot resolve a dispute concerning a detention with the port State may submit their case for review.

The Review Panel is composed of representatives of 3 different MOU Authorities on a rotating basis plus the Secretariat.

During the trial in 2001 and 2002 a total of 4 cases were







submitted to the panel. Three cases involving the flag State and one case from a classification society. Each case was administrated by the Secretariat and submitted to MOU members for review. Different members for each case.

In three cases the Review Panel considered the complaint justified and requested the port State to reconsider its judgement. As evidence of good co-operation all requests were honoured and the flag or classification society were informed accordingly.

#### New amendments to the MOU

The new amendments were adopted in 2002 in order to bring the Paris MOU in line with the latest changes of the EC Directive on Port State Control (Erika 1 Package) which will enter into force on 22 July 2003. The Paris MOU is introducing tough rules to target high risk ships. Certain categories of ships from flags on the Black List will be banned after 2 or 3 detentions. Expanded inspection for older oil tankers, chemical and gas carriers, bulk carriers and passenger ships is mandatory after 12 months from the last expanded inspection.

In a move to target high risk ships, a ship with a Target Factor greater than 50 will be inspected after a month from the last inspection in the Paris MOU. Banning rules are extended. A ship registered with a flag on the Black List will be refused access to ports in the MOU region:

- after the 2nd detention in 3 years if it is in the "very high risk" or "high risk" category on the Black List
- after the 3rd detention in 2 years if it is in a lower risk category on the Black List

Detentions from 22 January 2002 count towards a ban. To lift it the flag State and, where appropriate, class must certify that the ship complies with required standards, and the ship must complete an expanded inspection at the owners expense.

Port State inspectors will record the charterer of a ship carrying liquid or solid bulk cargoes. Ship owners need to make sure that the information is available on board.

A ship required under international rules to carry a functioning voyage data recorder may be detained if it is found not to be functioning properly.

More details can be found on the Paris MOU website, including a decision to begin inspecting ships with ILO working and rest hours regime, from July 2003.

#### **Training of Port State Control Officers**

In order to establish a higher degree of harmonisation and expertise the Authorities have invested substantial resources in regional training.

The Paris MOU has established a comprehensive training programme, which started in the fall of 2002. Several Expert and Specialized Training Courses will be given in 2003. Each course is completed with an examination and certification. This programme is in addition to the regular biannual seminars for Port State Control Officers. Substantial support for these courses has been received from the maritime industry and organizations, such as ITF, OCIMF, NKK Class and Videotel.

The courses, content and tools will continue to be reviewed and developed to meet the needs of an effective Port State Control regime.







### 4. Looking ahead

The Port State Control Committee is already looking ahead in order to anticipate new developments and to take concerted harmonised actions. Such actions need to enhance the effectiveness of the region in combating substandard shipping.

The Paris MOU Advisory Board (MAB) has considered several policy issues of a political or strategic nature and will submit proposals to the Committee in 2004 for consideration.

#### **Concentrated inspection campaign**

New international requirements from ILO Convention No. 180 on hours of work and rest have entered into force on 8 August 2002. Through the Protocol of ILO Convention No.147, they are also subject to port State control. This protocol entered into force on 10 January 2003. The Committee has agreed to verify these and other requirements for working and living conditions on board during a CIC in the fall of 2004.

#### **Recording of charterers**

It has been recognized that charterers also play a role in the chain of responsibility in maritime transport. If the only ships chartered are ships with a good safety record there will be no market for sub-standard ships. The Paris MOU has carried out a trial during 2002 recording the charterer of ships engaged in the transport of liquid or solid bulk cargoes.

In 2003 the data will be entered in the information system. As a next step the Committee may consider publishing the names of charterers of detained ships.

#### **Reward system**

A Task Force will be reporting on the results of the trial of a reward system for ships with a good safety and inspection history to the next meeting of the Committee in 2004.

# 5. Concentrated Inspection Campaigns

Several concentrated inspection campaigns have been held in the Paris MOU region over the past years. The campaigns focus on a particular area of compliance with international regulations with the aim of gathering information 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 concentrated Inspection Campaign in 2002 was dedicated to ISM compliance.

The campaign, which was held in conjunction with the Tokyo MOU, ran from 1 July to 30 September 2002. Port State Control Officers used a uniform questionnaire to test key elements of the ship's safety management system.

Results show that a total of 3846 eligible ships were inspected in the Paris MOU region during the campaign. A total of 163 ships were detained for major nonconformities in their system, resulting in an average detention percentage of 4.2%.

As may be expected, general cargo ships predominated among the number of ships that failed to comply with international safety management standards. Out of 1740 general cargo ships 128 (7.4%) were detained because of failings in their management systems alone. Bulk carriers showed a significant improvement when compared with the results of 1998. Their detention rate dropped from 8% in 1998 to 3.4% in 2002. Oil tankers and chemical tankers also improved their detention records in the 2002 campaign.

Remarkably, off-shore vessels showed the highest ISM non-compliance level with an ISM related detention rate of 7.7% and an overall detention rate of 30%. Passenger ships, special purpose ships and high speed craft were rated best with no ISM related detentions.

Six ships have been banned from the Paris MOU region for not having ISM certificates on board and a safety management system in place. These ships will not be



allowed to enter any Paris MOU ports until evidence has been provided that a certified safety management system is in place.

Of the areas of the management system inspected on board ship, the most frequent major non-conformities found were:

- Certificates and particulars not in order (14.3%)
- Senior officers not able to identify the "designated person" (13.8%)
- No maintenance routine and records available (13.8%)
- Master unable to provide documented proof of his responsibility and authority (11.7%)
- Senior officers not able to identify the company responsible for the operation of the ship (9.6%)
- Programmes for drills and exercises to prepare for emergency actions not available (9.1%)
- No certificates on board (8.2%)

Taking account of the scope of the campaign and the large number of inspections carried out, and comparing the results with the campaign carried out in 1998, the following conclusions can be drawn:

Although the documentary part of the management system on board seems to have improved over the past 4 years, the actual implementation by the responsible crew members on board leaves ample room for improvement. When senior officers are unable to identify the designated person of the company, the master is unable to provide documented proof of his responsibility and authority and senior officers are unable to identify the company responsible for the operation of the ship, it provides a clear indication that ship personnel are not applying the system to the operation of the ship.

The performance of flag States seen in 2002 is very different from that found in the 1998 campaign. This may be explained by the fact that most failures in noncompliance were found on general cargo ships which were not included in the previous campaign. It is not a surprise that the majority of the flags showing poor ISM compliance are also included in the 2002 Black List of the Paris MOU (Tonga, Belize, Lebanon, Syria, Ukraine, Morocco and Cambodia).

The performance of classification societies that issue ISM certificates on behalf of the flag State remains reason for concern. Although some changes in relative performance can be noted, the overall picture indicates that certification does not guarantee the actual implementation of a management system on board.

Looking at the results, it can be concluded that there is no room for complacency on the part of the Paris MOU. Continued efforts will be made by port State control to verify and ensure that the ISM Code does not become a paper exercise. As already mentioned in the executive summary of this report, ISM defects have increased by 260% over the past 2 years. The task is to ensure that safety management is driven by safety aspects and not by operational and commercial pressures of companies that operate in the shadows of the maritime industry. The Paris MOU also focussed on the implementation of the new STCW provisions.

The campaign started in 1 February 2002 and lasted 3 months, when it was discovered that nearly 80% of the inspected flag States had not fully implemented the amended STCW78/95 Convention.

The following elements were inspected during the campaign and showed non-compliance (expressed in percentage):

- safe manning document (SMD) on board (0.4% non compliant)
- ship manned in accordance with the SMD (2.3%)
- watch duty schedule posted on board (13,2%)
- deck and engineer officers appropriately certificated (8.2%)
- certificates issues under STCW78/95 amendments (7.1%)
- correct number of personnel certified for GMDSS (radio) (1.5%)
- required documentation for personnel with designated duties in order (3.2%)
- dispensation, if issued to any required seafarers, valid (62,1%)

To take account of IMO Circular Letter STCW.7/Circ.12 (25 January 2002) ships which would normally be subject to detention because of defects in certification of officers received a "Letter of Warning" (LoW) until 31 July 2002.

A total of 3492 ships from 86 flag States were inspected during the inspection campaign. Of these a total of 173 (5%) were detained because of serious STCW deficiencies. A total of 1124 (32,2%) of the inspected ships received a LoW for other STCW deficiencies.

The result shows that the industry, the individual administrations and seafarers were not ready for the implementation of the 1995 amendments of the STCW78/95 Convention, which came in force on 1 February 2002.

Although it is difficult to pin-point who takes responsibility for such poor performance, since every party involved seems to accuse the others, the fact remains that 70 flag States did not have their business in order on 1 February 2002. A sorry performance given a period of 7 years for implementation.



# 6. Membership of the Paris MOU

In preparation for prospective new members of the Paris MOU, the Port State Control Committee has adopted criteria for co-operating status for non-member States and observer status for newly developed PSC regions.

Specific criteria, including a self-evaluation exercise, have to be met before co-operating status can be granted. Regional agreements seeking observer status must 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.

In 2000 the Committee decided unanimously that Slovenia should be granted co-operating status. In April 2001 a Monitoring Team composed of representatives from Greece, the United Kingdom and the Secretariat visited Slovenia to determine whether the existing maritime safety system is adequate and in line with the information provided on the questionnaire. The results of the visit, including recommendations, have been considered and adopted by the Committee. It is anticipated that after a visit of a Fact Finding Mission composed of Germany, Italy, the European Commission and the Secretariat, Slovenia will join the Memorandum as a full member in 2003.

In 2001 the Committee also decided unanimously to accept Estonia as a co-operating member. A Monitoring Team has visited Estonia in April 2002 and recommendations towards a full member status have been endorsed by the Committee. A Fact Finding Mission has been scheduled for the fall of 2003.

In 2002 the Committee considered a detailed self evaluation prepared by the maritime Authorities of Latvia and decided unanimously that Latvia should be granted co-operating status. In April 2003 a Monitoring Team composed of representatives from Belgium, Denmark, the European Commission and the Secretariat will visit Latvia to determine whether the existing maritime safety system is adequate and in line with the information provided on the questionnaire.





# 7. Co-operation with other organisations

The strength of regional regimes of port State control which are bound by geographical circumstances and interests is widely recognised. Seven regional MOUs have been established. The Committee has expressed concern that some of these MOUs are dominated by Members who have not made efforts to exercise effective control over their own fleet. Many flag States belonging to regional MOUs appear on the Black List of the Paris MOU.

Two regional agreements have obtained official observer status with the Paris MOU: The Tokyo MOU and the Caribbean MOU. The United States Coast Guard is also an observer at Paris MOU meetings. This co-operation on an administrative level will help to ensure that port State control efforts remain compatible as far as is practicable. Other regions have not applied for observer status and would need to meet new Paris MOU criteria adopted in 2002 (see section 6) in order to co-operate on a technical and administrative basis.

The International Labour Organization and the International Maritime Organization have participated in the meetings of the Paris MOU on a regular basis. In 2002 the IMO organized a workshop for the Secretariats and database managers of regional agreements on port State control. Participants from all 7 regional agreements attended the workshop as well as representatives from their Members. The 2nd workshop, which carried on the progress made in 2000, agreed a set of "Recommendations", to be submitted for consideration by the Committee of each regional agreement.

The 2001 Annual Report including inspection data has been submitted to the Sub-Committee on Flag State Implementation (FSI) by the United Kingdom. To allow comparison of PSC information, the submission was drafted in a format comparable to the USCG. Despite these efforts, the discussion did not touch on the substance of non-compliance of several flag States, nor the measures taken by them to improve their records. The Paris MOU would welcome such a dialogue in the interest of safety and the protection of the marine environment.





## 8. Facts and figures

#### Introduction

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During 2002, 19,766 inspections were carried out in the Paris MOU region on 11,823 foreign ships registered in 106 different flag States. The number of inspections is substantially higher (5.8%) than the inspection figure for 2001 (18,681).

The number of individual ships inspected in 2002, 11,823, increased by 165 compared with the number inspected in 2001 (11,658). Over a 3 year period this number has only increased slightly, indicating that the Paris Memorandum has probably reached the ceiling of ships qualifying for an inspection.

The overall inspection rate in the region was 28.9% in 2002, compared with 27.3% in 2001, 28.6% in 2000 and 27.6% in 1999. France and, by a small margin, the Netherlands did not reach the 25% inspection commitment of the Memorandum.

A chart showing the individual efforts of Paris MOU members is included in the statistical annexes to this Annual Report.

#### Detentions

Detention rates are expressed as a percentage of the number of inspections, rather than the number of individual ships inspected. The change was introduced in 1999 to take account of the fact that many ships are detained more than once during any one year. The number of ships detained in 2002 for deficiencies clearly hazardous to safety, health or the environment amounted to 1,577. It compares with the number of 1,699 detained in 2001, 1,764 in 2000, and 1,684 in 1999. The significant decrease of 122 (7.2%) ships compared with 2001, has reduced the average detention percentage to 7.98% in 2002, compared with 9.09% in 2001, 9.50% in 2000 and 9.15% in 1999. This is the first time since 1993 that the detention percentage has fallen below 8%.

#### "Black, Grey and White List"

In the 1999 Annual Report the traditional "black list" of flags was replaced by a "Black, Grey and White List". The tables are still based on performance over a 3-year rolling period but now show the full spectrum between quality flags and flags with a poor performance which are considered a high or very high risk.

A "hard core" of flag States reappear on the "Black List". Most flags that were considered "very high risk" in 2001 remain so in 2002. The poorest performing flags are still Albania, Bolivia, Sao Tome & Principe, Tonga and Lebanon. Tonga, last years "newcomer" to the category of very high risk even managed to climb the ladder to 4th place. The fact that owners still manage to find new and exotic flags to register their ships is demonstrated by Dem. Rep. of Korea, which has entered the Black List as a high risk flag. Tunisia has moved from the "Grey List" to the "Black List".

On a more positive note: Azerbaijan and Russia have moved down from the "Black List" to the "Grey List" and will hopefully continue this trend.

The "White List" represents quality flags with a consistently low detention record. The Paris MOU flags of the United Kingdom, Sweden, Finland, Germany and Ireland are placed highest in terms of performance. The Isle of Man has shown remarkable performance and is now the 4th best register.

Barbados, Poland and Austria have moved down to the "Grey List".

New to the "White List" are Italy, Netherlands Antilles and the United States of America.

Flag States with an average performance are shown on the "Grey List". Their appearance on this list may act as an incentive to improve and move to the "White List". At the same time flags at the lower end of the "Grey List" should be careful not to neglect control over their ships and risk ending up on the "Black List" next year.

There are signs that several flags appearing on the "White List" now use their ranking to advertise themselves as quality registers and are making efforts to reach a higher ranking the following year.

#### **Ship Types**

Looking at detentions by ship type over several years, it is noted that general dry cargo ships and bulk carriers still account for over 80% of all detentions.

Last year's rise in detention percentage of passenger ships was confirmed in 2002.

During 2002 a total of 628 inspections took place on passenger ships, of which 57% showed deficiencies, 7.2% resulted in detention (45 detentions).



The performance of oil tankers has steadily improved over the last 3 years. Detention percentages have dropped from 8.1% in 2000 to 4.0% in 2002. A positive development in times when front pages are dominated by oil spills.

Statistical annexes to this report show the detention percentage for each ship type in 2002, 2001 and 2000.

#### **Banning of Ships**

A total of 24 ships were banned from the Paris MOU region in 2002, because they failed to call at an agreed repair yard (14), jumped detention (2) or were not certified in accordance with the ISM Code (8). By the end of 2002 the ban had been lifted on 11 of these ships after verification that all deficiencies had been rectified. A number of ships remain banned from previous years.

An up-to-date list of banned ships can be found on the internet site of the Paris MOU on Port State Control.

#### **Performance of Classification Societies**

Details of the responsibility of classification societies for detainable deficiencies have been published since 1999. When one or more detainable deficiencies are attributed to a classification society in accordance with the criteria it is recorded and class is informed. Out of 1,577 detentions recorded in 2002, 20% (312) were considered class related, a slight improvement when compared with 2001 (22%).

When considering the rate of class related detentions as a percentage of inspections in 2002, Register of Shipping (Albania) 34.5%, Isthmus Bureau of Shipping (Panama) 27.8%, Inclamar (Cyprus) 15.2%, International Register of Shipping (U.S.A.) 14.3%, International Naval Surveys Bureau (Greece) 12.1% scored highest as indicated in Model 2 in the Statistical Annex.

#### Deficiensies

A total of 69,079 deficiencies were recorded during port State control inspections in 2002, only a slight increase (0.5%) on the number of 68,756 recorded in 2001 (67,735 in 2000).

With some exceptions, ships older than 15 years show substantially more deficiencies than ships of less than 5 years.

The trends in key safety areas are shown below. More detailed information may be found in the statistical publication of the Paris MOU, the 2002 Blue Book.

#### Safety

In 2001, deficiencies in vital safety areas such as life saving appliances, fire fighting equipment, safety in general and navigation accounted for 48% of the total number of deficiencies.

Deficiencies in these areas decreased by 10% from 37,029 in 2000 to 33,242 in 2002.

This is a positive trend when compared with the last few years.

Older ships (15 years) show 26,818 deficiencies, compared to younger ships (5 years) with 1,414 deficiencies, a rate 19 times higher.

#### Marine environment

MARPOL73/78 Annex I, II, III and V deficiencies have decreased by 9%, from 5,719 in 2000 to 5,207 in 2002. Again a positive trend when compared with previous years.

In 2002 older ships (15 years) show 3,904 deficiencies, compared to younger ships (5 years) with 390 deficiencies, a deficiency rate 10 times higher.

#### Working and living conditions

Major categories related to working and living conditions are "crew and accommodation", "food and catering", "working places" and "accident prevention". Deficiencies in these areas decreased by 12%, from 5,178 in 2000 to 4,548 in 2002.

In 2002 older ships (15 years) show 3,946 deficiencies, compared to younger ships (5 years) with 89 deficiencies, a deficiency rate 44 times higher.





#### **Certification of crew**

Compliance with the standards for training, certification and watch keeping for seafarers indicated an increase of 368%, from 1,179 in 2000 to 5,522 in 2002. This is mainly due to the inspection campaign on the implementation of STCW95 requirements. Older ships (15 years) show 4,096 deficiencies in 2002, compared to younger ships (5 years) with 450 deficiencies, a deficiency rate 9 times higher.

#### Operational

Although MARPOL operational deficiencies have dropped substantially, SOLAS related operational deficiencies have steadily increased from 1132 in 2000 to 1353 deficiencies in 2002 (20%). A trend that is observed over the past years with concern.

In 2002 older ships (15 years) show 1,000 deficiencies, compared to younger ships (5 years) with 102 deficiencies, a rate 10 times higher.

#### Management

The International Safety Management Code came into force for certain categories of ships from July 1998, and was extended to other ships in July 2002. In the year

under review 3,210 (major) non-conformities were recorded, an increase of nearly 250% when compared with the 2000 results. The figures reflect the results of the Concentrated Inspection Campaign in 2002. They are alarming since they provide a clear indication that management systems are not working for certain ships.

Older ships (15 years) show 2505 (major) nonconformities, compared to younger ships (5 years) with 211 (major) non-conformities, a rate 12 times higher Most prominent are older general dry cargo ships and bulk carriers with 1866 non-conformities, 75% of the total (2505).

Older general dry cargo ships (15 years) show 1319 (major) non-conformities, which score a non-conformity rate 15 times higher than younger ships (5 years) with 89 (major) non-conformities.

Older bulk carriers (15 years) show 547 (major) nonconformities, which score a non-conformity rate 22 times higher than younger ships (5 years) with 25 (major) nonconformities.

Other ship types of over 15 years show lower rates, although ISM compliance of older tankers and passenger ships should be closely monitored.



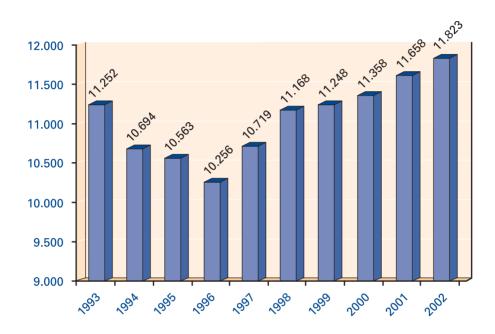


# Statistical Annexes to the ANNUAL REPORT 2002

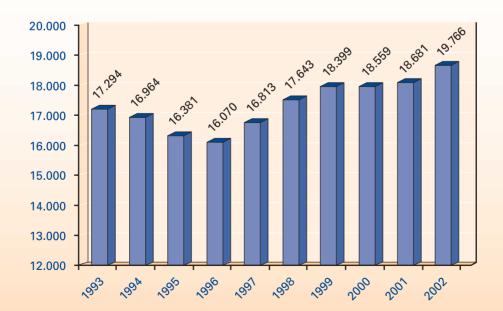


# Basic port State control figures 2002 - 1

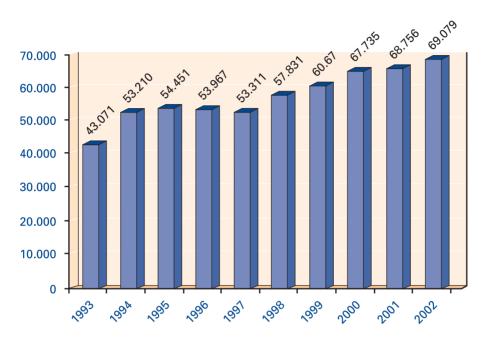
number of individual ships inspected



#### number of inspections



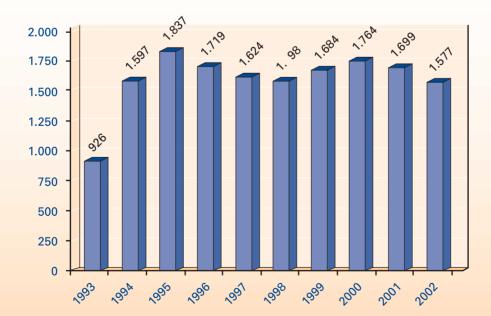




# Basic port State control figures 2002 - 2

number of deficiencies observed

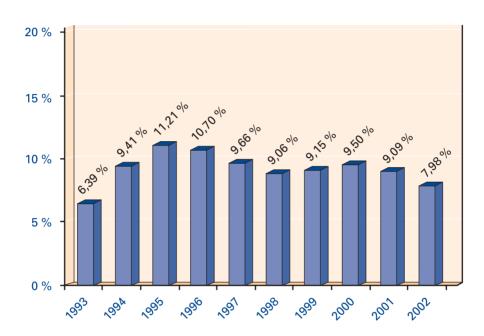
#### number of detentions





# Basic port State control figures 2002 - 3

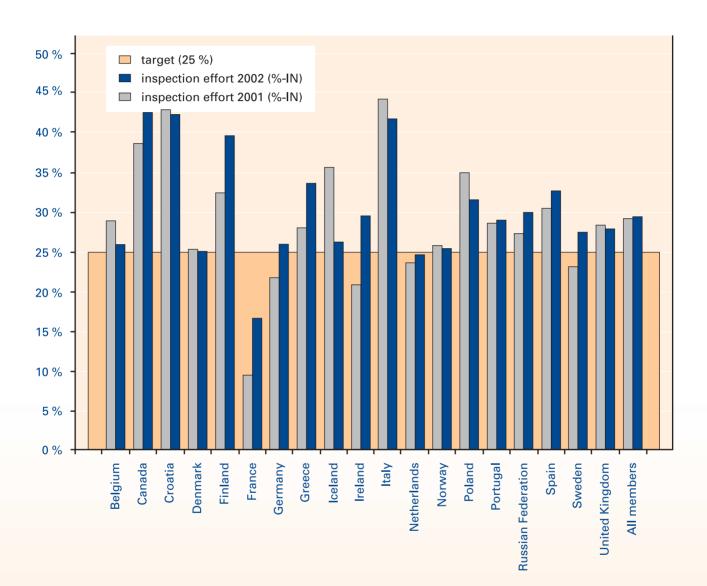
detentions in % of inspections



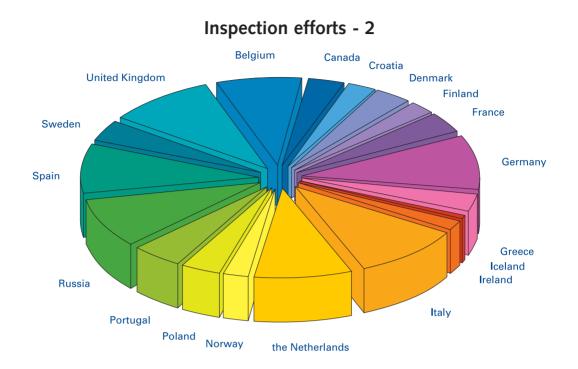


# Inspection efforts - 1

#### Inspection effort of members compared to target







# 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	5551	1444	632	80	20	43,77	5,54	26,01	7,31
Canada <sup>1</sup>	1760	742	259	25	13	34,91	3,37	42,16	3,75
Croatia	964	404	245	47	11	60,64	11,63	41,91	2,04
Denmark	2400	602	196	31	3	32,56	5,15	25,08	3,05
Finland	1311	516	204	11	1	39,53	2,13	39,36	2,61
France	5792	963	486	83	7	50,47	8,62	16,63	4,87
Germany	6745	1761	951	112	18	54,00	6,36	26,11	8,91
Greece	2670	894	504	93	10	56,38	10,40	33,48	4,52
Iceland	323	85	56	4	1	65,88	4,71	26,32	0,43
Ireland	1330	391	248	18	5	63,43	4,60	29,40	1,98
Italy	5850	2442	1482	375	87	60,69	15,36	41,74	12,35
Netherlands, the	5645	1394	696	93	17	49,93	6,67	24,69	7,05
Norway	1800	459	205	28	4	44,66	6,10	25,50	2,32
Poland	1914	596	377	30	4	63,26	5,03	31,14	3,02
Portugal	2830	813	605	110	23	74,42	13,53	28,73	4,11
Russian Federation <sup>2</sup>	6527	1936	1415	99	4	73,09	5,11	29,66	9,79
Spain	5594	1795	1195	201	48	66,57	11,20	32,09	9,08
Sweden	2850	769	328	16	3	42,65	2,08	26,98	3,89
United Kingdom	6457	1760	1223	121	33	69,49	6,88	27,26	8,90
	68313	19766	11307	1577	312		7,98	28,93	100,00

 $^1$  Only East coast of Canada  $^2$  Excluding Black Sea ports (Novorossiysk, Sochi and Tuapse) as from 01 December 2002



#### Flag State Inspections Black to Grey Grey to White Detentions Excess 2000-2002 2000-2002 Limit Limit Factor BLACK LIST Albania 126 69 14 14,35 Bolivia 76 40 9 12,88 Sao Tome and Principe 97 46 11 11,59 103 41 Tonga 12 9,26 Lebanon 237 77 24 7,84 very Algeria 200 61 20 7,07 Korea, Democratic Rep. 43 16 6 7,05 Honduras 226 68 23 7,04 Cambodia 911 230 77 6,30 high Georgia 212 56 21 5,85 2440 545 192 Turkey 5,65 Syrian Arab Republic 394 89 36 risk 5,07 57 8 4,90 Libyan Arab Jamahiriya 16 170 37 Romania 18 4,25 71 358 34 Belize 4,16 St Vincent & Grenadines 2365 403 186 high 3,93 Morocco 201 39 21 risk 3,67 748 100 mthr<sup>3</sup> Ukraine 64 2,47 Egypt 209 30 21 2,21 Panama 5213 541 396 1,90 Malta 5000 481 380 medium 1,65 India 209 24 21 1,38 Bulgaria 293 32 28 risk 1,38 7 Tunisia 44 6 1,35 3991 347 306 Cyprus 1,33 GREY LIST Croatia 166 17 18 6 0,96 19 210 21 8 Iran 0,83 5 Kuwait 48 7 0 0,74 6 8 Tuvalu 60 0 0,74 Cayman Islands 314 25 30 14 0,69 **Russian Federation** 2524 184 198 155 0,67 Azerbaijan 132 15 0,67 11 4 Portugal 676 50 59 36 0,62 3 5 Brazil 34 -1 0,61 Qatar 34 3 5 -1 0,61 63 5 8 Taiwan 1 0,58 28 36 Lithuania 383 18 0,57 20 273 27 0,56 Gibraltar 12 Faroe Islands 40 3 6 0 0,53 Estonia 326 23 31 15 0,51 106 7 12 3 Thailand 0,46 8 Latvia 62 4 1 0,46 34 2 5 Ethiopia -1 0,44

# Black - Grey - White lists

 $^{3}$  mthr = medium to high risk



Flag State	Inspections 2000-2002	Detentions 2000-2002	Black to Grey Limit	Grey to White Limit	Excess Factor
		GREY LIST			
Malaysia	150	9	16	5	0,37
Myanmar, Union of	37	1	6	0	0,24
Korea, Republic of	92	4	11	2	0,23
United Arab Emirates	40	1	6	0	0,21
Vanuatu	117	5	13	3	0,18
Philippines	202	10	21	8	0,18
Spain	188	8	19	7	0,09
Poland	211	9	21	8	0,06
Austria	103	3	12	2	0,06
Barbados	267	12	26	11	0,05
Saudi Arabia	67	1	9	1	0,03
		WHITE LIST	_	-	
Switzerland	50	0	7	0	-0,04
Japan	75	1	9	1	-0,08
Italy	780	40	67	42	-0,11
Marshall Islands	509	23	46	26	-0,20
Antigua and Barbuda	3506	198	271	220	-0,22
France	273	10	27	12	-0,25
Greece	1422	73	116	83	-0,26
Bahamas	3157	172	245	197	-0,28
Antilles, Netherlands	384	15	36	18	-0,33
U.S.A.	133	3	15	4	-0,34
Israel	59	0	8	0	-0,40
Bermuda	194	5	20	7	-0,50
Singapore	635	24	56	33	-0,56
China, People's Rep.	281	8	27	12	-0,61
Hong Kong, China	474	16	43	24	-0,62
Luxembourg	187	4	19	7	-0,67
Denmark	1309	49	107	76	-0,75
Liberia	2652	104	208	164	-0,80
Norway	2601	100	204	160	-0,82
Netherlands, the	2861	100	223	177	-0,96
Ireland	189	2	20	7	-1,18
Germany	1415	36	115	83	-1,22
Man, Isle of	546	10	49	28	-1,30
Finland	508	8	46	26	-1,39
Sweden	852	15	72	47	-1,44
United Kingdom	807	8	69	44	-1,74



#### Inspection-% with deficiencies Detention-% with deficiencies Inspections nspections Detentions Flag State Albania 56 34 47 60,71 83,93 59 17 55 28,81 93,22 Algeria Antigua and Barbuda 1385 79 835 5,70 60,29 Antilles, Netherlands 162 5 85 3,09 52,47 Austria 12 0 7 0,00 58,33 Azerbaijan 42 2 36 4,76 85,71 1094 575 Bahamas 47 4,30 52,56 Bahrain 0 2 0,00 3 66,67 58,62 Barbados 87 51 2,30 2 9 Belgium 10 1 10,00 90,00 Belize 113 23 96 20,35 84,96 Bermuda 60 1 16 1,67 26,67 Bolivia 23 14 22 60,87 95,65 14 1 12 7,14 Brazil 85,71 94 9 Bulgaria 67 9,57 71,28 Cambodia 371 82 318 22,10 85,71 Canada 0 0 0,00 0,00 1 0 Cape Verde 1 1 0,00 100,00 8 Cayman Islands 122 66 6,56 54,10 China, People's Rep. 37 94 1 1,06 39,36 Comoros 25 20 10 40,00 80,00 Cook Islands 1 1 1 100,00 100,00 Croatia 56 5 33 8,93 58,93 1279 95 Cyprus 784 7,43 61,30 Denmark 441 20 204 4,54 46,26 Egypt 68 9 57 13,24 83,82 0 1 1 0,00 100,00 Eritrea 6 89 56 6,74 62,92 Estonia Ethiopia 14 1 10 7,14 71,43 1 Faroe Islands 16 11 6,25 68,75 Finland 6 41,86 172 72 3,49 5 France 96 50 5,21 52,08 21 88 79,28 Georgia 111 18,92 5 187 1,10 41,28 Germany 453 Gibraltar 159 14 92 8,81 57,86 Greece 509 25 228 4,91 44,79 18 Honduras 67 52 26,87 77,61 5 193 65 2,59 33,68 Hong Kong, China 0 Hungary 1 0 0,00 0,00 Iceland 1 0 0 0,00 0,00 India 53 3 36 5,66 67,92 70 4 44 5,71 62,86 Iran 0 Ireland 62 31 0,00 50,00 0 0,00 Israel 13 0 0,00 10 139 51,10 Italy 272 3,68 87,50 Jamaica 8 4 7 50,00

# Inspections, detentions and deficiencies 2002



Flag State	Inspections	Detentions	Inspections with deficiencies	Detention-%	Inspection-% with deficiencies
Japan	23	0	13	0,00	56,52
Jordan	3	1	3	33,33	100,00
Kazakhstan	1	0	1	0,00	100,00
Korea, Republic of	33	0	17	0,00	51,52
Korea, Democratic Rep.	32	9	26	28,13	81,25
Kuwait	12	1	6	8,33	50,00
Latvia	16	1	8	6,25	50,00
Lebanon	63	17	55	26,98	87,30
Liberia	926	34	404	3,67	43,63
Libyan Arab Jamahiriya	7	2	7	28,57	100,00
Lithuania	128	8	91	6,25	71,09
Luxembourg	69	1	25	1,45	36,23
Madagascar	1	0	1	0,00	100,00
Malaysia	62	2	33	3,23	53,23
Malta	1637	121	1043	7,39	63,71
Man, Isle of	221	2	98	0,90	44,34
Marshall Islands	208	8	84	3,85	40,38
Mauritius	1	0	0	0,00	0,00
Mexico	2	0	2	0,00	100,00
Morocco	62	9	47	14,52	75,81
Myanmar, Union of	16	0	8	0,00	50,00
Netherlands, the	1032	39	468	3,78	45,35
Norway	875	33	381	3,77	43,54
Pakistan	10	2	9	20,00	90,00
Panama	1835	173	1023	9,43	55,75
Philippines	57	5	37	8,77	64,91
Poland	44	3	22	6,82	50,00
Portugal	227	13	140	5,73	61,67
Qatar	7	0	6	0,00	85,71
Register Withdrawn	5	5	5	100,00	100,00
Romania	55	12	46	21,82	83,64
Russian Federation	793	56	444	7,06	55,99
Sao Tome and Principe	4	2	4	50,00	100,00
Saudi Arabia	16	0	6	0,00	37,50
Seychelles	2	0	1	0,00	50,00
Singapore	207	6	80	2,90	38,65
Slovakia	1	0	1	0,00	100,00
Slovenia	2	0	1	0,00	50,00
South Africa	2	0	2	0,00	100,00
Spain	79	4	36	5,06	45,57
Sri Lanka	1	0	0	0,00	0,00
St Vincent & Grenadines	815	144	620	17,67	76,07
Sweden	306	6	127	1,96	41,50
Switzerland	18	0	6	0,00	33,33
Syrian Arab Republic	111	22	95	19,82	85,59
Taiwan	17	2	12	11,76	70,59

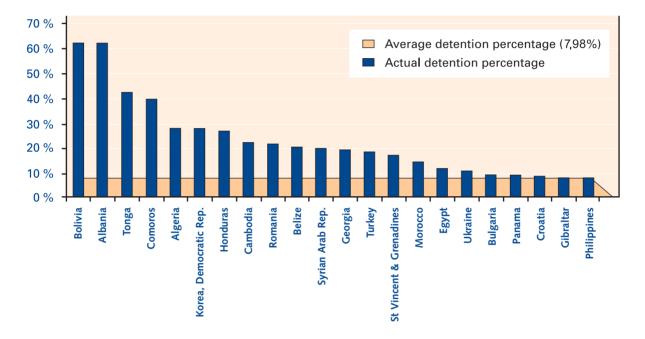


Flag State	Inspections	Detentions	Inspections with deficiencies	Detention-%	Inspection-% with deficiencies
Thailand	35	1	22	2,86	62,86
Tonga	73	31	65	42,47	89,04
Tunisia	14	5	10	35,71	71,43
Turkey	852	160	675	18,78	79,23
Turkmenistan	1	0	1	0,00	100,00
Tuvalu	16	2	10	12,50	62,50
U.S.A.	50	0	13	0,00	26,00
Ukraine	244	28	179	11,48	73,36
United Arab Emirates	14	0	7	0,00	50,00
United Kingdom	348	8	160	2,30	45,98
Vanuatu	36	1	11	2,78	30,56
Venezuela	2	1	1	50,00	50,00
Viet Nam	3	2	3	66,67	100,00
Yugoslavia	1	1	1	100,00	100,00
Totals and averages	19766	1577	11307	7,98	57,20



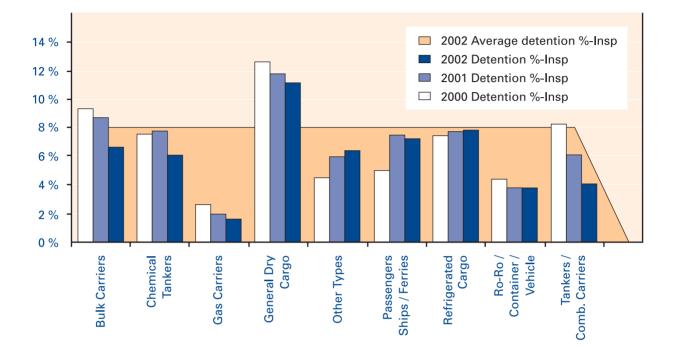
# 2002 detentions per flag State, exceeding average percentage

- Only flags with more than 20 port State control inspections in 2002 are recorded in this table and the graph on the next page
- The light area at the bottom of the graph represents the 2002 average detention percentage (7,98%)



Flag	Inspections	Detentions	Detentions %	Excess of average
Bolivia	23	14	60,87	52,89
Albania	56	34	60,71	52,73
Tonga	73	31	42,47	34,49
Comoros	25	10	40,00	32,02
Algeria	59	17	28,81	20,83
Korea, Democratic Rep.	32	9	28,13	20,15
Lebanon	63	17	26,98	19,00
Honduras	67	18	26,87	18,89
Cambodia	371	82	22,10	14,12
Romania	55	12	21,82	13,84
Belize	113	23	20,35	12,37
Syrian Arab Republic	111	22	19,82	11,84
Georgia	111	21	18,92	10,94
Turkey	852	160	18,78	10,80
St Vincent & Grenadines	815	144	17,67	9,69
Morocco	62	9	14,52	6,54
Egypt	68	9	13,24	5,26
Ukraine	244	28	11,48	3,50
Bulgaria	94	9	9,57	1,59
Panama	1835	173	9,43	1,45
Croatia	56	5	8,93	0,95
Gibraltar	159	14	8,81	0,83
Philippines	57	5	8,77	0,79





# 2002 Detention % of Inspections per ship type

# Inspections and detentions per ship type

SHIP TYPE	Inspections	Inspections with deficiencies	% of inspections. with deficiencies	Individual ships	Detentions	Detention. % 2002	Detention. % 2001	Detention. % 2000	+/- average detention %
Bulk Carriers	3269	1916	58,61	2270	220	6,73	8,67	9,26%	-1,25
Chemical Tankers	510	270	52,94	322	31	6,08	7,66	7,28%	-1,90
Gas Carriers	285	98	34,39	211	4	1,40	1,84	2,66%	-6,58
General Dry Cargo	9524	6098	64,03	4900	1044	10,96	11,77	12,85%	2,98
Other Types	413	234	56,66	327	26	6,30	5,94	4,32%	-1,68
Passenger Ships/Ferries	628	358	57,01	382	45	7,17	7,50	4,83	-0,81
Refrigerated Cargo	284	169	59,51	196	22	7,75	7,66	7,17%	-0,23
Ro-Ro/Container/Vehicle	2572	1113	43,27	1706	93	3,62	3,63	4,40%	-4,36
Tankers/Comb. Carriers	2281	1051	46,08	1509	92	4,03	5,96	8,09%	-3,95
All types	19766	11307	57,2	11823	1577	7,98	9,09%	9,50%	



# Major categories of deficiencies in relation to inspections/ships

					. IN % C			tio of def			io of def v. ships >	
	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
Ship's certificates and documents	3465	3581	3369	5,1	5,2	4,88	18,8	19,2	17,04	30,8	30,7	28,50
Training certification and watchkeeping for seafarers	1179	1302	5522	1,7	1,9	7,99	6,4	7,0	27,94	10,5	11,2	46,71
Crew and Accommodation (ILO 147)	1963	2113	1853	2,9	3,1	2,68	10,7	11,3	9,37	17,5	18,1	15,67
Food and catering (ILO 147)	1031	876	664	1,5	1,3	0,96	5,6	4,7	3,36	9,2	7,5	5,62
Working space (ILO 147)	678	703	602	1,0	1,0	0,87	3,7	3,8	3,05	6,0	6,0	5,09
Life saving appliances	10942	10516	9009	16,2	15,3	13,04	59,5	56,3	45,58	97,3	90,2	76,20
Fire Safety measures	8789	8547	8158	13,0	12,4	11,81	47,8	45,8	41,27	78,1	73,3	69,00
Accident prevention (ILO 147)	1506	1586	1429	2,2	2,3	2,07	8,2	8,5	7,23	13,4	13,6	12,09
Safety in general	9243	8951	9306	13,7	13,0	13,47	50,2	47,9	47,08	82,2	76,8	78,71
Alarm - signals	330	326	301	0,5	0,5	0,44	1,8	1,7	1,52	2,9	2,8	2,55
Carriage of cargo and dangerous goods	836	1323	1028	1,2	1,9	1,49	4,5	7,1	5,20	7,4	11,3	8,69
Load lines	3816	3906	3507	5,6	5,7	5,08	20,7	20,9	17,74	33,9	33,5	29,66
Mooring arrangements (ILO 147)	878	1109	1060	1,3	1,6	1,53	4,8	5,9	5,36	7,8	9,5	8,97
Propulsion & aux machinery	3671	3713	3606	5,4	5,4	5,22	20,0	19,9	18,24	32,6	31,8	30,50
Safety of navigation	8055	8315	6769	11,9	12,1	9,80	43,8	44,5	34,25	71,6	71,3	57,25
Radio communication	2638	2703	2421	3,9	3,9	3,50	14,3	14,5	12,25	23,5	23,2	20,48
MARPOL - annex I	4875	5116	4421	7,2	7,4	6,40	26,5	27,4	22,37	43,3	43,9	37,39
Oil tankers, chemical tankers and gas carriers	212	151	202	0,3	0,2	0,29	1,2	0,8	1,02	1,9	1,3	1,71
MARPOL - annex II	71	43	64	0,1	0,1	0,09	0,4	0,2	0,32	0,6	0,4	0,54
SOLAS related operational deficiencies	1132	1262	1353	1,7	1,8	1,96	6,2	6,8	6,85	10,1	10,8	11,44
MARPOL related operational deficiencies	618	456	341	0,9	0,7	0,49	3,4	2,45	1,73	5,5	3,9	2,88
MARPOL - annex III	31	13	21	0,0	0,0	0,03	0,2	0,1	0,11	0,3	0,1	0,18
MARPOL - annex V	742	758	701	1,1	1,1	1,01	4,0	4,1	3,55	6,6	6,5	5,93
ISM	929	1239	3210	1,4	1,8	4,65	5,0	6,6	16,24	8,3	10,6	27,15
Bulk carriers - additional safety measures	9	50	51	0,0	0,1	0,07	0,0	0,3	0,26	0,1	0,4	0,43
Other def. clearly hazardous safety	44	33	4	0,1	0,1	0,07	0,2	0,2	0,24	0,4	0,3	0,41
Other def. not clearly hazardous	52	65	63	0,1	0,1	0,09	0,3	0,3	0,32	0,5	0,6	0,53
TOTAL	67735	68756	69079									



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

No Class Recorded     80     22     70     27,50 %     7,72 %       Class Not Specified     85     30     64     35,29 %     15,51 %       American Bureau of Shipping     ABS     82     10     73     12,19 %     -7,59 %       Biro Klasifikasi Indonesia     BKI     0     0     0     0,00%     -19,78 %       Burgarsk Koraben Registar     BKR     14     5     13     35,71 %     15,39 %       Bureau Veritas (France)     BV     232     30     191     12,93 %     -6,85 %       Ceskostovensky Lodin Register (Czechosl.)     CS     0     0     0,00%     -19,78 %       Croatian Register of Shipping     CCRS     2     0     2     0,00 %     -19,78 %       Croatian Register of Shipping     CRS     13     4     13     30,77 %     10,99 %       Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     -8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     30,00 %	Classification Society <sup>4</sup>		Total number of detentions	Detentions with class related deficiencies	Number of individual ships	Percentage Detentions with class related deficiencies	+/- Percentage Average
Class Withdrawn     71     20     59     28,17 %     8,39 %       Class Not Specified     85     30     64     35,29 %     15,51 %       American Bureau of Shipping     ABS     82     10     73     12,19 %     -7,59 %       Biro Klasifikasi Indonesia     BKI     0     0     0,00%     -19,78 %       Burgau Vertus (France)     BV     232     30     191     12,93 %     -6,85 %       Ceskoslovensky Lodin Register (Czechosl.)     CS     0     0     0,00%     -19,78 %       China Corporation Register of Shipping     CRS     2     0     0     .19,78 %       Cotatian Register of Shipping     CRS     13     4     13     30,77 %     10,99 %       Certanischer Lloyd     GL     210     24     184     11,42 %     -8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     32,14 %     12,36 %       Honduras Inter. Naval Survey and Insp. Bur.     HINSIB     1     13     33,33 %     13,55 %	No Class Recorded		80	22		27,50 %	7,72 %
Class Not Specified   85   30   64   35,29 %   15,51 %     American Bureau of Shipping   ABS   82   10   73   12,19 %   -7,59 %     Bulgarski Koraben Registar   BKR   14   5   13   35,71 %   15,93 %     Bureau Veritas (France)   BV   232   30   191   12,93 %   -6,68 %     Ceskoslovensky Lodin Register (Czechosl.)   CS   0   0   0,00 %   -19,78 %     China Cassification Society   CCS   3   0   3   0,00 %   -19,78 %     China Corporation Register of Shipping   CRS   13   4   13   30,07 %   -10,99 %     Det Norske Veritas (Norway)   DNVC   79   9   75   11,39 %   -8,39 %     Germanischer Lloyd   GL   210   24   184   11,42 %   -8,36 %     Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Indian Register of Shipping (USA)   IS   13   5   11   38,45 %   15,81 %     International Naval Surveys Bureau (Greece)	Class Withdrawn		71		59		
Biro Klasifikasi Indonesia     BKI     0     0     0,00%     -19,78 %       Bulgarski Koraben Registar     BKR     14     5     13     35,71 %     15,93 %       Burgau Verlas (France)     BV     232     30     191     12,93 %     -6,65 %       Ceskoslovensky Lodin Register (Czechosl.)     CS     0     0     0,00%     -19,78 %       China Corporation Register of Shipping     CCRS     3     4     13     30,07 %     10,99 %       Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     -8,39 %       Germanischer Lloyd     GL     210     24     184     11,42 %     - 8,36 %       Hellenic Register of Shipping     IRS     0     0     00,00 %     30,22 %       Indian Register of Shipping     IRS     0     0     00 00 %     30,22 %       Indian Register of Shipping (USA)     IS     13     5     11     38,46 %     18,86 %       International Register of Shipping (ICA)     IS     13     5     6     50,00 %	Class Not Specified		85	30	64	35,29 %	15,51 %
Bulgarski Koraben Registar     BKR     14     5     13     35,71 %     15,93 %       Bureau Veritas (France)     BV     232     30     191     12,93 %     -6,85 %       Ceskoslovensky Lodin Register (Czechosl.)     CS     0     0     0,00 %     -19,78 %       China Clasification Society     CCS     3     0     3     0,00 %     -19,78 %       Croatian Register of Shipping     CRS     13     4     13     30,07 %     10,99 %       Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     -8,39 %       Germanischer Lloyd     GL     210     24     184     11,42 %     -8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     32,14 %     13,55 %       Inclamar (Cyprus)     INC     10     5     8     50,00 %     30,22 %       Indram Register of Shipping (USA)     IS     13     5     11     38,46 %     18,86 %       International Register of Shipping (USA)     IS     14     <	American Bureau of Shipping	ABS	82	10	73	12,19 %	-7,59 %
Bureau Veritas (France)     BV     232     30     191     12,93 %     -6,85 %       Ceskoslovensky Lodin Register (Czechosl.)     CS     0     0     0,00 %     -19,78 %       China Cassification Society     CCS     3     0     3     0,00 %     -19,78 %       Croatian Register of Shipping     CCRS     13     4     13     30,77 %     10,99 %       Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     -8,39 %       Germanischer Lloyd     GL     210     24     184     11,42 %     -8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     32,14 %     12,36 %       Indiam Register of Shipping     INC     10     5     8     50,00 %     30,22 %       International Naval Surveys Bureau (Greece)     INSB     41     15     34     36,59 %     15,81 %       International Register of Shipping (USA)     IS     13     5     11     38,46 %     30,02 %       Isthmus Bureau of Shipping (Gutk Korea)     K	Biro Klasifikasi Indonesia	BKI	0	0	0	0,00%	- 19,78 %
Ceskoslovensky Lodin Register (Czechosl.)   CS   0   0   0,00%   -19,78 %     China Classification Society   CCS   3   0   2   0,00%   -19,78 %     Chana Corporation Register of Shipping   CCRS   2   0   2   0,00%   -19,78 %     Croatian Register of Shipping   CRS   13   4   13   30,77 %   10,99 %     Det Norske Veritas (Norway)   DNVC   79   9   75   11,39 %   - 8,39 %     Germanischer Lloyd   GL   210   24   1144   11,42 %   - 8,36 %     Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Indian Register of Shipping   INC   10   5   8   50,00 %   30,22 %     Indian Register of Shipping (Suck)   IS   13   5   11   38,46 %   18,68 %     International Naval Surveys Bureau (Greece)   INS   0   0   0,000 %   -19,78 %     International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bu	Bulgarski Koraben Registar	BKR	14	5	13	35,71 %	15,93 %
China Classification Society   CCS   3   0   3   0,00 %   - 19,78 %     China Corporation Register of Shipping   CCRS   2   0   2   0,00 %   - 19,78 %     Croatian Register of Shipping   CRS   13   4   13   30,77 %   10,99 %     Det Norske Veritas (Norway)   DNVC   79   9   75   11,39 %   - 8,39 %     Germanischer Lloyd   GL   210   24   184   11,42 %   - 8,36 %     Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Inclamar (Cyprus)   INC   10   5   8   50,00 %   30,22 %     Indian Register of Shipping Bargu (Greece)   INSB   41   15   34   36,59 %   15,81 %     International Register of Shipping (ISA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (Outh Korea)   KRS   6   1   6   16,67 %   -3,11 %     Lloyd's Register of Shipping (U.K.)   LRS   185   40   163   21,62 %   1,84 % </td <td>Bureau Veritas (France)</td> <td>BV</td> <td>232</td> <td>30</td> <td>191</td> <td>12,93 %</td> <td>-6,85 %</td>	Bureau Veritas (France)	BV	232	30	191	12,93 %	-6,85 %
China Corporation Register of Shipping     CCRS     2     0     2     0,00 %     -19,78 %       Croatian Register of Shipping     CRS     13     4     13     30,77 %     10,99 %       Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     -8,39 %       Germanischer Lloyd     GL     210     24     184 11,42 %     -8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     32,14 %     12,36 %       Indiam Register of Shipping     INC     10     5     8     50,00 %     30,22 %       Indian Register of Shipping     INS     41     15     34     36,59 %     15,81 %       International Naval Surveys Bureau (Greece)     INSB     41     15     34     36,59 %     15,81 %       International Register of Shipping (USA)     IS     13     5     11     38,46 %     18,68 %       Isthmus Bureau of Shipping (Suth Korea)     KS     6     1     6     16,67 %     -3,11 %       Lloyd'S Register of Shipping (JUA)	Ceskoslovensky Lodin Register (Czechosl.)	CS	0	0	0	0,00%	- 19,78 %
Croatian Register of Shipping   CRS   13   4   13   30,77 %   10,99 %     Det Norske Veritas (Norway)   DNVC   79   9   75   11,39 %   - 8,39 %     Germanischer Lloyd   GL   210   24   184   11,42 %   - 8,36 %     Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Indiam Register of Shipping   INC   10   5   8   50,00 %   30,22 %     Indian Register of Shipping   IRS   0   0   0,00 %   - 19,78 %     International Naval Surveys Bureau (Greece)   INSB   41   15   34   36,59 %   15,81 %     International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (South Korea)   KRS   6   1   6   16,67 %   - 3,11 %     Lloyd's Register of Shipping (UL)   LRS   185   40   163   21,62 %   1,84 %     National Shipping Adjusters Inc   1   0   1   0,00 %   - 19,78 %   Panama Karitime Surveyors Bure	China Classification Society	CCS	3	0	3	0,00 %	- 19,78 %
Det Norske Veritas (Norway)     DNVC     79     9     75     11,39 %     - 8,39 %       Germanischer Lloyd     GL     210     24     184     11,42 %     - 8,36 %       Hellenic Register of Shipping (Greece)     HRS     28     9     23     32,14 %     12,36 %       Inclamar (Cyprus)     INC     10     5     8     50,00 %     30,22 %       Indian Register of Shipping     INS     0     0     0,00 %     - 19,78 %       International Naval Surveys Bureau (Greece)     INSB     41     15     34     35,59 %     15,81 %       International Register of Shipping (USA)     IS     13     5     11     38,46 %     186 %       Isthmus Bureau of Shipping (South Korea)     KRS     6     1     6     16,67 %     -3,11 %       Lloyd's Register of Shipping (U.K.)     LRS     185     40     163     21,62 %     1,84 %       Marconi International Marine Company Ltd     0     0     0,00 %     -19,78 %       Nippon Kaiji Kyokai (Japan)     NKK     70     1	China Corporation Register of Shipping	CCRS	2	0	2	0,00 %	- 19,78 %
Germanischer Lloyd   GL   210   24   184   11,42 %   - 8,36 %     Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Honduras Inter. Naval Survey and Insp. Bur.   HINSIB   3   1   3   33,33 %   13,55 %     Inclamar (Cyprus)   INC   10   5   8   50,00 %   30,22 %     Indian Register of Shipping   IRS   0   0   0,00 %   -19,78 %     International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (South Korea)   KRS   6   1   6   16,67 %   -3,11 %     Lloyd's Register of Shipping (U.K.)   LRS   185   40   163   21,62 %   1,84 %     Marconi International Marine Company Ltd   0   0   0,000 %   -19,78 %     Nuipon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nu Unitas (Belgium)   -0   0   0,000 %   -19,78 %   Panama Register Orspration   PRC   1   -0   1	Croatian Register of Shipping	CRS	13	4	13	30,77 %	10,99 %
Hellenic Register of Shipping (Greece)   HRS   28   9   23   32,14 %   12,36 %     Honduras Inter. Naval Survey and Insp. Bur.   HINSIB   3   1   3   33,33 %   13,55 %     Inclamar (Cyprus)   INC   10   5   8   50,00 %   30,22 %     Indian Register of Shipping   IRS   0   0   0,00 %   -19,78 %     International Naval Surveys Bureau (Greece)   INSB   41   15   34   36,59 %   15,81 %     International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (OLK.)   LRS   185   40   163   21,62 %   -1,84 %     Marconi International Marine Company Ltd   0   0   0   0,000 %   -19,78 %     Nippon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nv Unitas (Belgium)   -0   0   0   0,000 %   -19,78 %     Panama Aritime Surveyors Bureau Inc   PMSB   4   -0   3   0,000 %   -19,78 %     Palosk Register Corpora	Det Norske Veritas (Norway)	DNVC	79	9	75	11,39 %	- 8,39 %
Honduras Inter. Naval Survey and Insp. Bur.HINSIB31333,33 %13,55 %Inclamar ( Cyprus)INC105850,00 %30,22 %Indian Register of ShippingIRS000,00 %-19,78 %International Naval Surveys Bureau (Greece)INSB41153436,59 %15,81 %International Register of Shipping (USA)IS1351138,46 %18,68 %Isthmus Bureau of Shipping (Panama)IBS105650,00 %30,22 %Korean Register of Shipping (U.K.)LRS1854016321,62 %1,84 %Lloyd's Register of Shipping (U.K.)LRS1854016321,62 %1,84 %Marconi International Marine Company Ltd0000,00 %-19,78 %Nutical Shipping Adjusters Inc11010,00 %-19,78 %Nv Unitas (Belgium)-0000,00 %-19,78 %Panama Maritime Surveyors Bureau IncPMSB4-030,00 %-19,78 %Polski Rejestr Statkow (Poland)PRS4653510,87 %-8,91 %Register of Shipping (North Korea)RC1010,00 %-19,78 %Register of Shipping North Korea)1000,00 %-19,78 %Register of Shipping North Korea)1010,00 %-19,78 %Register of Shipping North Korea)1010,	Germanischer Lloyd	GL	210	24	184	11,42 %	
Inclamar ( Cyprus)     INC     10     5     8     50,00 %     30,22 %       Indian Register of Shipping     IRS     0     0     0,00 %     - 19,78 %       International Naval Surveys Bureau (Greece)     INSB     41     15     34     36,59 %     15,81 %       International Register of Shipping (USA)     IS     13     5     11     38,46 %     18,68 %       Isthmus Bureau of Shipping (OLA)     IS     13     5     6     50,00 %     30,22 %       Korean Register of Shipping (South Korea)     KRS     6     1     6     16,67 %     - 3,11 %       Lloyd's Register of Shipping (U.K.)     LRS     185     40     163     21,62 %     1,84 %       Marconi International Marine Company Ltd     0     0     0,00 %     - 19,78 %       Nutional Shipping Adjusters Inc     1     0     1     0,00 %     - 19,78 %       Panama Register Corporation     PRC     1     0     3     0,00 %     - 19,78 %       Polski Rejestr Statkow (Poland)     PRS     46     5	Hellenic Register of Shipping (Greece)	HRS	28	9	23	32,14 %	12,36 %
Indian Register of Shipping   IRS   0   0   0   0.00 %   - 19,78 %     International Naval Surveys Bureau (Greece)   INSB   41   15   34   36,59 %   15,81 %     International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (Panama)   IBS   10   5   6   50,00 %   30,22 %     Korean Register of Shipping (South Korea)   KRS   6   1   6   16,67 %   - 3,11 %     Lloyd's Register of Shipping (U.K.)   LRS   185   40   163   21,62 %   1,84 %     Marconi International Marine Company Ltd   0   0   0   0,00%   - 19,78 %     National Shipping Adjusters Inc   1   0   1   0,00%   - 19,78 %     Panama Register Corporation   PRC   1   -0   3   0,00 %   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   - 19,78 %     Paster of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %	Honduras Inter. Naval Survey and Insp. Bur.	HINSIB			3	33,33 %	
International Naval Surveys Bureau (Greece)     INSB     41     15     34     36,59 %     15,81 %       International Register of Shipping (USA)     IS     13     5     11     38,46 %     18,68 %       Isthmus Bureau of Shipping (Panama)     IBS     10     5     6     50,00 %     30,22 %       Korean Register of Shipping (South Korea)     KRS     6     1     6     16,67 %     - 3,11 %       Lloyd's Register of Shipping (U.K.)     LRS     185     40     163     21,62 %     1,84 %       Marconi International Marine Company Ltd     0     0     0     0,000 %     -19,78 %       Nippon Kaiji Kyokai (Japan)     NKK     70     19     66     27,14 %     7,36 %       Nv Unitas (Belgium)     -0     0     0     0,000 %     -19,78 %       Panama Register Corporation     PRC     1     -0     1     0,00 %     -19,78 %       Polski Rejestr Statkow (Poland)     PRS     46     5     35     10,87 %     -8,91 %       Register of Shipping (North Korea)     1	Inclamar ( Cyprus)		10	5	8	50,00 %	30,22 %
International Register of Shipping (USA)   IS   13   5   11   38,46 %   18,68 %     Isthmus Bureau of Shipping (Panama)   IBS   10   5   6   50,00 %   30,22 %     Korean Register of Shipping (South Korea)   KRS   6   1   6   16,67 %   - 3,11 %     Lloyd's Register of Shipping (U.K.)   LRS   185   40   163   21,62 %   1,84 %     Marconi International Marine Company Ltd   0   0   0   0,000 %   - 19,78 %     National Shipping Adjusters Inc   1   0   1   0,000 %   - 19,78 %     Nv Unitas (Belgium)   -0   0   0   0,000 %   - 19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,000 %   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,000 %   - 19,78 %     Pastifie Surveyors Bureau Inc   PMSB   4   -0   3   0,000 %   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   - 19,78 %     Register of Shipping (Al	Indian Register of Shipping	IRS	0	0	0	0,00 %	
Isthmus Bureau of Shipping (Panama)     IBS     10     5     6     50,00 %     30,22 %       Korean Register of Shipping (South Korea)     KRS     6     1     6     16,67 %     - 3,11 %       Lloyd's Register of Shipping (U.K.)     LRS     185     40     163     21,62 %     1,84 %       Marconi International Marine Company Ltd     0     0     0     0,00%     - 19,78 %       National Shipping Adjusters Inc     1     0     1     0,00 %     - 19,78 %       Nutonal Shipping Adjusters Inc     1     0     1     0,00 %     - 19,78 %       Nv Unitas (Belgium)     -0     0     0,000 %     - 19,78 %       Panama Maritime Surveyors Bureau Inc     PMSB     4     -0     3     0,00 %     - 19,78 %       Polski Rejestr Statkow (Poland)     PRC     1     -0     1     0,00 %     - 19,78 %       Register of Shipping (Albania)     RS     19     10     16     52,63 %     32,85 %       Register of Shipping People's R.C. (China)     0     0     0     0,00 %	International Naval Surveys Bureau (Greece)	INSB	41	15	34	36,59 %	15,81 %
Korean Register of Shipping (South Korea)KRS61616,67 %- 3,11 %Lloyd's Register of Shipping (U.K.)LRS1854016321,62 %1,84 %Marconi International Marine Company Ltd000,00%- 19,78 %National Shipping Adjusters Inc1010,00 %- 19,78 %Nippon Kaiji Kyokai (Japan)NKK70196627,14 %7,36 %Nv Unitas (Belgium)-0000,00%- 19,78 %Panama Maritime Surveyors Bureau IncPMSB4-030,00 %- 19,78 %Panama Register CorporationPRC1-010,00 %- 19,78 %Polski Rejestr Statkow (Poland)PRS4653510,87 %- 8,91 %Register of Shipping (Albania)RS19101652,63 %32,85 %Register of Shipping People's R.C. (China)000,000 %- 19,78 %Registro Cubano De Buques (Cuba)RCB41325,00 %5,22 %Registro Italiano Navale (Italy)RINA383367,89 %- 11,89 %RinavLP Portuguesa (Portugal)RP5030,00 %- 19,78 %Russian Federation Maritime Register of ShippingRMRS1523013619,74 %- 0,04 %Russian Federation Maritime Register of Shipping RMRS1523013619,74 %- 0,04 %Russian Federation River RegisterRR <td>International Register of Shipping (USA)</td> <td>IS</td> <td>13</td> <td></td> <td>11</td> <td>38,46 %</td> <td>18,68 %</td>	International Register of Shipping (USA)	IS	13		11	38,46 %	18,68 %
Lloyd's Register of Shipping (U.K.)   LRS   185   40   163   21,62 %   1,84 %     Marconi International Marine Company Ltd   0   0   0,00%   -19,78 %     National Shipping Adjusters Inc   1   0   1   0,00%   -19,78 %     Nippon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nv Unitas (Belgium)   -0   0   0   0,00%   -19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00 %   -19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   -19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   -8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping People's R.C. (China)   0   0   0,00 %   -19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   3	Isthmus Bureau of Shipping (Panama)	IBS	10	5	6	50,00 %	30,22 %
Marconi International Marine Company Ltd   0   0   0,00%   - 19,78 %     National Shipping Adjusters Inc   1   0   1   0,00%   - 19,78 %     Nippon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nv Unitas (Belgium)   -0   0   0   0,00%   - 19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00%   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00%   - 19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping North Korea)   1   0   1   0,00%   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0 <td< td=""><td>Korean Register of Shipping (South Korea)</td><td>KRS</td><td>6</td><td>1</td><td>6</td><td>16,67 %</td><td>- 3,11 %</td></td<>	Korean Register of Shipping (South Korea)	KRS	6	1	6	16,67 %	- 3,11 %
National Shipping Adjusters Inc   1   0   1   0,00 %   - 19,78 %     Nippon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nv Unitas (Belgium)   -0   0   0,00%   - 19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00 %   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   - 19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00 %   - 19,78 %     Registro Tubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0	Lloyd's Register of Shipping (U.K.)	LRS	185	40	163	21,62 %	1,84 %
Nippon Kaiji Kyokai (Japan)   NKK   70   19   66   27,14 %   7,36 %     Nv Unitas (Belgium)   -0   0   0,00%   -19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00 %   -19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   -19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   -8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   -19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00 %   -19,78 %     Registro Lubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   -11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   -19,78 %     Russian Federation Maritime Register of Shipping   RMRS	Marconi International Marine Company Ltd		0	0	0	0,00%	- 19,78 %
Nv Unitas (Belgium)   -0   0   0   0,00%   -19,78 %     Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00 %   -19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   -19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,000 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,000 %   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Russian Federation Maritime Register of Shipping RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register	National Shipping Adjusters Inc		1	0	1	0,00 %	- 19,78 %
Panama Maritime Surveyors Bureau Inc   PMSB   4   -0   3   0,00 %   - 19,78 %     Panama Register Corporation   PRC   1   -0   1   0,00 %   - 19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00 %   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Russian Federation Maritime Register of Shipping   RMR   13   1   10   7,69 %   - 11,89 %     Russian Federation River Register   RR   12   30   136   19,74 %   - 0,04 %     <	Nippon Kaiji Kyokai (Japan)	NKK	70	19	66	27,14 %	
Panama Register Corporation   PRC   1   -0   1   0,00 %   - 19,78 %     Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00 %   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Russian Federation Maritime Register of Shipping   RMR   13   1   10   7,69 %   - 12,09 %     Russian Federation River Register   RR   12   30   136   19,74 %   - 0,04 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 12,64 %     Shipping Register of Ukra	Nv Unitas (Belgium)		-0	0	0	0,00%	- 19,78 %
Polski Rejestr Statkow (Poland)   PRS   46   5   35   10,87 %   - 8,91 %     Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00 %   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Russian Federation Maritime Register of Shipping   RMR   13   1   10   7,69 %   - 12,09 %     Russian Federation River Register   RR   152   30   136   19,74 %   - 0,04 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 12,64 %     Shipping Register of Ukraine   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL   48	Panama Maritime Surveyors Bureau Inc	PMSB	4	-0	3	0,00 %	- 19,78 %
Register of Shipping (Albania)   RS   19   10   16   52,63 %   32,85 %     Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00%   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00%   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 11,89 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL	Panama Register Corporation		1	-0	1	0,00 %	- 19,78 %
Register of Shipping (North Korea)   1   0   1   0,00 %   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00%   - 19,78 %     Register of Shipping People's R.C. (China)   0   0   0   0,00%   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 11,89 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	Polski Rejestr Statkow (Poland)	PRS	46	5	35	10,87 %	- 8,91 %
Register of Shipping People's R.C. (China)   0   0   0   0,00%   - 19,78 %     Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 11,89 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	Register of Shipping (Albania)	RS	19	10	16	52,63 %	32,85 %
Registro Cubano De Buques (Cuba)   RCB   4   1   3   25,00 %   5,22 %     Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 12,09 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %			1	0	1	0,00 %	- 19,78 %
Registro Italiano Navale (Italy)   RINA   38   3   36   7,89 %   - 11,89 %     RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 12,09 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,000 %   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	Register of Shipping People's R.C. (China)		0	0	0	0,00%	- 19,78 %
RINAVE Portuguesa (Portugal)   RP   5   0   3   0,00 %   - 19,78 %     Romanian Naval Register   RNR   13   1   10   7,69 %   - 12,09 %     Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,00%   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	Registro Cubano De Buques (Cuba)	RCB	4	1	3	25,00 %	5,22 %
Romanian Naval Register     RNR     13     1     10     7,69 %     - 12,09 %       Russian Federation Maritime Register of Shipping     RMRS     152     30     136     19,74 %     - 0,04 %       Russian Federation River Register     RR     12     1     12     7,14 %     - 12,64 %       Shipping Register of Ukraine     0     0     0,00%     - 19,78 %       Turkish Lloyd     TL     48     7     38     14,58 %     - 5,20 %	Registro Italiano Navale (Italy)	RINA	38	3	36	7,89 %	- 11,89 %
Russian Federation Maritime Register of Shipping   RMRS   152   30   136   19,74 %   - 0,04 %     Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0,00%   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	RINAVE Portuguesa (Portugal)	RP	5	0	3	0,00 %	- 19,78 %
Russian Federation River Register   RR   12   1   12   7,14 %   - 12,64 %     Shipping Register of Ukraine   0   0   0   0,00%   - 19,78 %     Turkish Lloyd   TL   48   7   38   14,58 %   - 5,20 %	Romanian Naval Register	RNR	13	1	10	7,69 %	- 12,09 %
Shipping Register of Ukraine     0     0     0     0,00%     - 19,78 %       Turkish Lloyd     TL     48     7     38     14,58 %     - 5,20 %	Russian Federation Maritime Register of Shipping	RMRS	152	30	136	19,74 %	- 0,04 %
Turkish Lloyd     TL     48     7     38     14,58     ~ 5,20     %	Russian Federation River Register	RR	12	1	12	7,14 %	- 12,64 %
•	Shipping Register of Ukraine		0	0	0		
Viet Nam Register of Shipping     VRS     0     0     0     0,00%     - 19,78 %	-		48	7	38	14,58 %	- 5,20 %
	Viet Nam Register of Shipping	VRS	0	0	0	0,00%	- 19,78 %

\*) The information contained in the statistical material of Models 1-4 concerning classification societies were collected during the calendar year 2002 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 1,5 percent to either side.

<sup>4</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.



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

### (Cases in which more than 10 inspections are involved)

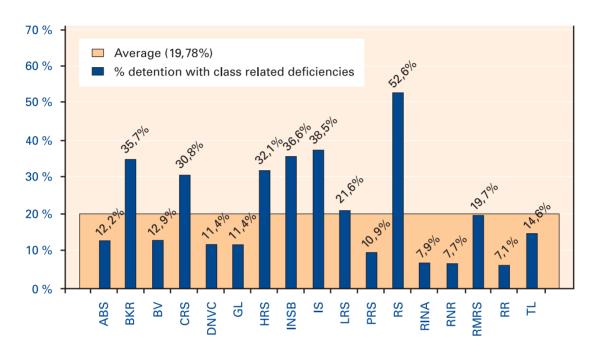
Classification Society <sup>5</sup>		Total number of inspections	Number of individual ships inspected	Total number of detentions	Detention-% of total number of inspections	+/- Percentage Average	Detention-% of individual ships inspected	+/- Percentage Average
No Class Recorded		907	710	22	2,43 %	0,85 %	3,10 %	0,50 %
Class Withdrawn		375	275	20	5,33 %	3,76 %	7,27 %	4,68 %
Class Not Specified		259	139	30	11,58 %	10,01 %	21,58 %	18,99 %
American Bureau of Shipping	ABS	1201	812	10	0,83 %	-0,74 %	1,23 %	-1,36 %
Bulgarski Koraben Registar	BKR	106	60	5	4,72 %	3,14 %	8,33 %	5,74 %
Bureau Veritas (France)	BV	2475	1387	30	1,21 %	-0,36 %	2,16 %	-0,43 %
China Classification Society	CCS	151	115	-0	0,00 %	-1,58 %	0,00 %	-2,59 %
China Corporation Register of Shipping	CCRS	15	12	-0	0,00 %	-1,58 %	0,00 %	-2,59 %
Croatian Register of Shipping	CRS	97	63	4	4,12 %	2,55 %	6,35 %	3,75 %
Det Norske Veritas (Norway)	DNVC	2271	1497	9	0,40 %	-1,18 %	0,60 %	-1,99 %
Germanischer Lloyd	GL	3726	1950	24	0,64 %	-0,93 %	1,23 %	-1,36 %
Hellenic Register of Shipping (Greece)	HRS	140	72	9	6,43 %	4,85 %	12,50 %	9,91 %
Honduras Inter. Naval Survey and Insp. Bur.	HINSIB	16	7	1	6,25 %	4,67 %	14,29 %	11,69 %
Inclamar ( Cyprus)	INC	33	15	5	15,15 %	13,58 %	33,33 %	30,74 %
Indian Register of Shipping	IRS	21	16	-0	0,00 %	-1,58 %	0,00 %	-2,59 %
International Naval Surveys Bureau (Greece)	INSB	124	64	15	12,10 %	10,52 %	23,44 %	20,84 %
International Register of Shipping (USA)	IS	35	20	5	14,29 %	12,71 %	25,00 %	22,41 %
Isthmus Bureau of Shipping (Panama)	IBS	18	7	5	27,78 %	26,20 %	71,43 %	68,83 %
Korean Register of Shipping (South Korea)	KRS	136	104	1	0,74 %	-0,84 %	0,96 %	-1,63 %
Lloyd's Register of Shipping (U.K.)	LRS	3261	1996	40	1,23 %	-0,35 %	2,00 %	-0,59 %
Marconi International Marine Company Ltd		24	23	0	0,00%	0,00%	0,00%	0,00%
Nippon Kaiji Kyokai (Japan)	NKK	1412	1008	19	1,35 %	-0,23 %	1,88 %	-0,71 %
Polski Rejestr Statkow (Poland)	PRS	327	154	5	1,53 %	-0,05 %	3,25 %	0,65 %
Register of Shipping (Albania)	RS	29	20	10	34,48 %	32,91 %	50,00 %	47,41 %
Registro Italiano Navale (Italy)	RINA	549	324	3	0,55 %	-1,03 %	0,93 %	-1,67 %
RINAVE Portuguesa (Portugal)	RP	37	19	-0	0,00 %	-1,58 %	0,00 %	-2,59 %
Romanian Naval Register	RNR	61	37	1	1,64 %	0,06 %	2,70 %	0,11 %
Russian Federation Maritime Register of Shippi	ing RMRS	1622	916	30	1,85 %	0,27 %	3,28 %	0,68 %
Russian Federation River Register	RR	102	75	1	0,98 %	-0,60 %	1,33 %	-1,26 %
Turkish Lloyd (Turkey)	TL	200	90	7	3,50 %	1,92 %	7,78 %	5,18 %

<sup>5</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.



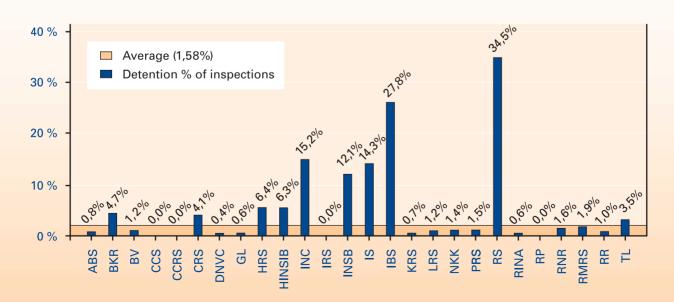
# Model 1 - Detentions with class related detainable deficiencies in % of total number of detentions (per Classification Society)





# 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 page 26)





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

	Number of ships with class related detainable deficiencies, 3				
Classification Society <sup>6</sup>	detained once	detained twice	detained thrice		
No Class Recorded	20	1	0		
Class Withdrawn	18	1	0		
Class Not Specified	24	3	0		
American Bureau of Shipping	8	1	0		
Bulgarski Koraben Registar	5	0	0		
Bureau Veritas (France)	20	5	0		
China Classification Society	0	0	0		
China Corporation Register of Shipping	0	0	0		
Croatian Register of Shipping (Croatia)	4	0	0		
Det Norske Veritas (Norway)	9	0	0		
Germanischer Lloyd	22	1	0		
Hellenic Register of Shipping (Greece)	9	0	0		
Honduras Inter. Naval Survey and Insp. Bur.	1	0	0		
Inclamar ( Cyprus)	5	0	0		
Indian Register of Shipping	0	0	0		
International Naval Surveys Bureau (Greece)	9	3	0		
International Register of Shipping (USA)	5	0	0		
Isthmus Bureau of Shipping (Panama)	5	0	0		
Korean Register of Shipping (South Korea)	1	0	0		
Lloyd's Register of Shipping (U.K.)	40	0	0		
National Shipping Adjusters Inc	0	0	0		
Nippon Kaiji Kyokai (Japan)	19	0	0		
Panama Maritime Surveyors Bureau Inc	0	0	0		
Panama Register Corporation	0	0	0		
Polski Rejestr Statkow (Poland)	5	0	0		
Register of Shipping (Albania)	6	2	0		
Register of Shipping (North Korea)	0	0	0		
Registro Cubano De Buques (Cuba)	1	0	0		
Registro Italiano Navale (Italy)	3	0	0		
RINAVE Portuguesa (Portugal)	0	0	0		
Romanian Naval Register	1	0	0		
Russian Federation Maritime Register of Shipping	24	3	0		
Russian Federation River Register	1	0	0		
Turkish Lloyd	7	0	0		

<sup>6</sup> Where a country is shown after a classification society this indicates its location and not necessarily any connection with the maritime administration of that country.
<sup>7</sup> No ship has been detained more than 2 times in 2002.



# 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	36	17	47,22 %	44,62 %
Algeria	32	0	0,00 %	-2,60 %
Antigua and Barbuda	658	8	1,22 %	-1,39 %
Antilles, Netherlands	97	0	0,00 %	-2,60 %
Austria	8	0	0,00 %	-2,60 %
Azerbaijan	24	0	0,00 %	-2,60 %
Bahamas	664	9	1,36 %	-1,25 %
Bahrain	3	0	0,00 %	-2,60 %
Barbados	46	0	0,00 %	-2,60 %
Belgium	7	0	0,00 %	-2,60 %
Belize	62	9	14,52 %	11,91 %
Bermuda	45	0	0,00 %	-2,60 %
Bolivia	11	7	63,64 %	61,03 %
Brazil	9	1	11,11 %	8,51 %
Bulgaria	55	4	7,27 %	4,67 %
Cambodia	202	24	11,88 %	9,28 %
Canada	1	0	0,00 %	-2,60 %
Cape Verde	1	0	0,00 %	-2,60 %
Cayman Islands	88	1	1,14 %	-1,47 %
China, People's Rep.	74	0	0,00 %	-2,60 %
Comoros	14	2	14,29 %	11,68 %
Cook Islands	1	0	0,00 %	-2,60 %
Croatia	39	1	2,56 %	-0,04 %
Cyprus	747	23	3,08 %	0,47 %
Denmark	293	4	1,37 %	-1,24 %
Egypt	36	0	0,00 %	-2,60 %
Eritrea	1	0	0,00 %	-2,60 %
Estonia	47	2	4,26 %	1,65 %
Ethiopia	6	0	0,00 %	-2,60 %
Faroe Islands	10	0	0,00 %	-2,60 %
Finland	110	0	0,00 %	-2,60 %
France	68	0	0,00 %	-2,60 %
Georgia	56	9	16,07 %	13,47 %
Germany	271	1	0,37 %	-2,24 %
Gibraltar	82	0	0,00 %	-2,60 %
Greece	365	1	0,27 %	-2,33 %
Honduras	30	4	13,33 %	10,73 %
Hong Kong, China	159	2	1,26 %	-1,35 %
Hungary	1	0	0,00 %	-2,60 %
Iceland	1	0	0,00 %	-2,60 %
India	41	0	0,00 %	-2,60 %
Iran	42	1	2,38 %	-0,22 %
Ireland	28	0	0,00 %	-2,60 %
Israel	10	0	0,00 %	-2,60 %



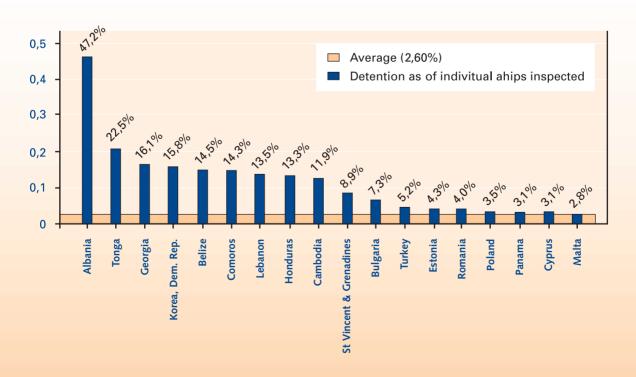
Flag state	Number of individual ships inspected	Number of ships detained (ships with class related deficiencies)	Detentions as % of individual ships inspected	+/- Percentage of average
Italy	191	1	0,52 %	-2,08 %
Jamaica	3	3	100,00 %	97,40 %
Japan	17	0	0,00 %	-2,60 %
Jordan	3	0	0,00 %	-2,60 %
Kazakhstan	1	0	0,00 %	-2,60 %
Korea Republic of	28	0	0,00 %	-2,60 %
Korea, Democratic Rep.	19	3	15,79 %	13,19 %
Kuwait	10	0	0,00 %	-2,60 %
Latvia	12	0	0,00 %	-2,60 %
Lebanon	37	5	13,51 %	10,91 %
Liberia	679	8	1,18 %	-1,43 %
Libyan Arab Jamahiriya	4	0	0,00 %	-2,60 %
Lithuania	61	0	0,00 %	-2,60 %
Luxembourg	40	0	0,00 %	-2,60 %
Madagascar	1	0	0,00 %	-2,60 %
Malaysia	47	0	0,00 %	-2,60 %
Malta	936	26	2,78 %	0,17 %
Man, Isle of	140	0	0,00 %	-2,60 %
Marshall Islands	135	2	1,48 %	-1,12 %
Mauritius	1	0	0,00 %	-2,60 %
Mexico	1	0	0,00 %	-2,60 %
Morocco	34	0	0,00 %	-2,60 %
Myanmar, Union of	8	0	0,00 %	-2,60 %
Netherlands, the	580	3	0,52 %	-2,09 %
Norway	573	4	0,70 %	-1,91 %
Pakistan	4	0	0,00 %	-2,60 %
Panama	1275	40	3,14 %	0,53 %
Philippines	43	0	0,00 %	-2,60 %
Poland	29	1	3,45 %	0,84 %
Portugal	98	1	1,02 %	-1,58 %
Qatar	6	0	0,00 %	-2,60 %
Register Withdrawn	5	2	40,00 %	37,40 %
Romania	25	1	4,00 %	1,40 %
Russian Federation	508	5	0,98 %	-1,62 %
Sao Tome and Principe	4	1	25,00 %	22,40 %
Saudi Arabia	12	0	0,00 %	-2,60 %
Seychelles	2	0	0,00 %	-2,60 %
Singapore	156	2	1,28 %	-1,32 %
Slovakia	1	0	0,00 %	-2,60 %
Slovenia	1	0	0,00 %	-2,60 %
South Africa	2	0	0,00 %	-2,60 %
Spain	55	0	0,00 %	-2,60 %
Sri Lanka	1	0	0,00 %	-2,60 %
St Vincent & Grenadines	370	33	8,92 %	6,31 %
Sweden	198	1	0,51 %	-2,10 %
Switzerland	10	0	0,00 %	-2,60 %
Syrian Arab Republic	64	1	1,56 %	-1,04 %
Taiwan	13	0	0,00 %	-2,60 %



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
Thailand	23	0	0.00.%	
	40	9	0,00 % 22,50 %	<mark>-2,60 %</mark> 19,90 %
Tonga Tunisia	40	9	12,50 %	9,90 %
	422	22	5,21 %	2,61 %
Turkey Turkmenistan	422	0	0,00 %	-2,60 %
		0	0,00 %	,
Tuvalu	6	-	,	-2,60 %
U.S.A.	39	0	0,00 %	-2,60 %
Ukraine	148	3	2,03 %	-0,58 %
United Arab Emirates	11	0	0,00 %	-2,60 %
United Kingdom	227	2	0,88 %	-1,72 %
Vanuatu	25	0	0,00 %	-2,60 %
Venezuela	2	1	50,00 %	47,40 %
Viet Nam	3	1	33,33 %	30,73 %
Yugoslavia	1	0	0,00 %	-2,60 %

# 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.

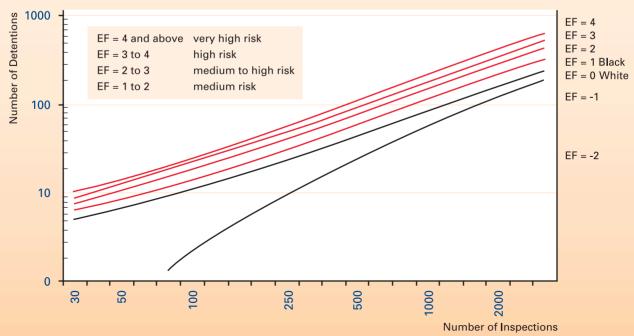
The performance of each flag State is calculated using a standard formula for statistical calculations in which certain values have been fixed in accordance with agreed Paris MOU policy. Two limits have been included in the new system, the 'black to grey' and the 'grey to white' limit, each with its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

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

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

To sort results on the black or white list, simply alter the target and repeat the calculation. Flags which are still significantly above this second target, are worse than the flags which are not. This process can be repeated, to create as many refinements as desired. (Of course the maximum detention rate remains 100%!) To make the flags' performance comparable, the excess factor (EF) is introduced. Each incremental or decremental step corresponds with one whole EF-point of difference. Thus the excess factor EF is an indication for the number of times the yardstick has to be altered and recalculated. Once the excess factor is determined for all flags, the flags can be ordered by EF. The excess factor can be found in the last column the black, grey or white list. The target (yardstick) has been set on 7% and the size of the increment and decrement on 3%. The Black/Grey/ White lists have been calculated in accordance with the above principles.

The graphical representation of the system, below, is showing the direct relations between the number of inspected ships and the number of detentions. Both axis have a logarithmic character. **as the 'black to grey' or the 'grey to white' limit.** 





#### **Example flag on Black list:**

Ships of Romania were subject to 170 inspections of which 37 resulted in a detention . The "black to grey limit" is 18 detentions. The excess factor is 4,25

N= total inspections P = 7% Q = 3% Z = 1.645

How to determine the black to grey limit:

 $u_{blacktogrey} = N \cdot p + 0.5 + z\sqrt{N \cdot p \cdot (1-p)}$  $u_{blacktogrey} = 170 \cdot 0.07 + 0.5 + 1.645\sqrt{170 \cdot 0.07 \cdot 0.93}$  $u_{blacktogrey} = 18$ 

The excess factor is 4,25. 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 3,25, and the outcome has to be added to the normal value for 'p':

 $p + 3.25q = 0.07 + (3.25 \cdot 0.03) = 0.1675$  $u_{excessfactor} = 170 \cdot 0.1675 + 0.5 + 1.645\sqrt{170 \cdot 0.1675 \cdot 0.8325}$  $u_{excessfactor} = 37$ 

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

Ships of Thailand were subject to 106 inspections, of which 7 resulted in a detention. The ' black to grey limit" is 12 and the "grey to white limit" is 3. The excess factor is 0.46.

How to determine the black to grey limit:

 $u_{blacktogrey} = 106 \cdot 0.07 + 0.5 + 1.645\sqrt{106 \cdot 0.07 \cdot 0.93}$ 

 $u_{blacktogrey} = 12$ 

How to determine the grey to white limit:

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

 $u_{greytowhite} = 106 \cdot 0.07 - 0.5 - 1.645\sqrt{106 \cdot 0.07 \cdot 0.93}$ 

 $u_{greytowhite} = 3$ 

To determine the excess factor the following formula is used:

ef = Detentions - grey to white limit/grey to black limit grey to white limit

ef = (7 - 3)ef = 0.46

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

Ships of Liberia were subject to 2652 inspections of which 104 resulted in detention. The "grey to white limit" is 164 detentions. The excess factor is -0,80. How to determine the grey to white limit:

 $u_{greytowhite} = N \cdot p - 0.5 - z\sqrt{N \cdot p \cdot (1-p)}$  $u_{greytowhite} = 2652 \cdot 0.07 - 0.5 - 1.645\sqrt{2652 \cdot 0.07 \cdot 0.93}$ 

 $u_{greytowhite} = 164$ 

The excess factor is - 0,80 This means that 'p' has to be adjusted in the formula. The grey to white limit has an excess factor of 0, so to determine the new value for 'p', 'q' has to be multiplied with -0,80, and the outcome has to be added to the normal value for 'p':

 $p + (-0.80q) = 0.07 + (-0.80 \cdot 0.03) = 0.046$  $u_{excessfactor} = 2652 \cdot 0.046 - 0.5 - 1.645\sqrt{2652 \cdot 0.046} \cdot 0.954$  $u_{excessfactor} = 104$ 



# Secretariat Paris Memorandum of Understanding on Port State Control



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# Paris MOU fact sheet - organizational structure

