

# PORT STATE CONTROL IN AUSTRALIA



# 2001 PORT STATE CONTROL REPORT



*Australia*

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AMSA detention data is available at [www.amsa.gov.au/sp/shipdet/sdetlink.htm](http://www.amsa.gov.au/sp/shipdet/sdetlink.htm)

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## PREFACE

The Australian Government is committed to the objectives of improving maritime safety and protecting the marine environment from ship-sourced pollution.

One of the key strategies utilised by the Australian Maritime Safety Authority to achieve these objectives continues to be an effective port State control regime. The 2001 Port State Control Report provides an outline of AMSA's performance and activities in this field, as well as regional and international perspectives on port State control.

Port State control remains a highly effective weapon in combating unseaworthy and substandard shipping, and the continuing inability or unwillingness of some flag States and ship operators to fulfil their obligations under the international maritime conventions. The declining trend which AMSA has seen in recent years in the detention rate of ships inspected in Australia has levelled out this year, with a very slight rise from the 2000 detention rate. This result is likely to be the consequence of improvements made to our risk-based inspection targeting system, and also the result of the focussed inspection campaigns which were running during the year. More information on both these areas is contained within the report.

From an international and longer-term perspective, 2001 saw considerable measures taken by the International Maritime Organisation, International Association of Classification Societies, industry bodies and regional forums, which will, if effectively implemented, further improve maritime safety and preserve the marine environment.

The maritime community is also responding to world events in addressing maritime security issues through action at the International Maritime Organisation and the International Labour Organisation. Port State control will no doubt be a crucial tool in ensuring any measures are effectively implemented in the future and through Australia's active engagement in their development, AMSA will be well placed to respond to any challenges presented.



Clive Davidson  
Chief Executive  
Australian Maritime Safety Authority  
April 2002

## SUMMARY OF DETENTIONS AND INSPECTIONS

|                          | 1997 | 1998 | 1999 | 2000 | 2001 |
|--------------------------|------|------|------|------|------|
| <b>Total Inspections</b> | 3131 | 2946 | 2753 | 2926 | 2913 |
| <b>Total Detentions</b>  | 203  | 201  | 145  | 125  | 127  |
| <b>Detention %</b>       | 6.5  | 6.8  | 5.3  | 4.3  | 4.4  |

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## OVERVIEW

### Port State Control - Application

It is the sovereign right of each nation to exercise control over foreign-flag ships that are operating within areas under its territorial jurisdiction. A number of international maritime conventions adopted by the International Maritime Organization (IMO) and the International Labour Organization (ILO) provide nations with the instruments to conduct control inspections of foreign ships visiting their ports. These inspections are called port State control (PSC) inspections.

When shipowners, classification societies and flag State administrations have failed to comply with the requirements of the international conventions, port State control comes into effect. PSC inspections are conducted to ensure that foreign ships are seaworthy, do not pose a pollution risk, provide a healthy and safe working environment and comply with relevant conventions of the IMO and ILO.

When undertaking a PSC inspection the surveyor first conducts an initial inspection which consists of a visit on board to verify the ship carries the necessary certificates and documentation and that these certificates are valid for the voyage on which it is about to proceed. In addition surveyors use a standard initial inspection checklist and inspect a number of critical areas essential for the safe operation of the vessel.

Where certification is invalid or where there are clear grounds to suspect that a ship and/or its equipment or crew may not be in substantial compliance with the relevant convention requirements, a more detailed inspection is undertaken.

### Port State Control in Australia

In Australia, the Australian Maritime Safety Authority (AMSA) has, as one of its objectives associated with enhancing maritime safety and environmental protection, the responsibility for conducting PSC inspections in Australian ports. They are carried out on foreign vessels within Australian jurisdiction by AMSA marine surveyors appointed under the Australian Navigation Act. Domestic Legislation contains the authority for AMSA marine surveyors to board a vessel at any time to investigate issues that have the potential to jeopardise safety or the environment.

Australia has 14 ports permanently manned by 40 AMSA surveyors. These surveyors undertake port State control inspections and other duties related to ship safety and marine environment protection. In addition there are 65 other ports not permanently manned by AMSA surveyors where PSC inspections are regularly carried out. A list of ports where ships visited during 2001 is presented later in this report.

Australia conducts a PSC program that complies with both the spirit and the intent of the control provisions contained within the relevant international conventions. In addition to complying with Australian Government safety objectives, AMSA's PSC program also focuses on the aims of the Asia-Pacific and Indian Ocean Memoranda of Understanding on Port State Control, which join the major maritime nations in the Asia-Pacific and Indian Ocean regions to common PSC strategies through the operation of uniform and consistent PSC programs.

AMSA's objective is to inspect at least 50% of foreign ships visiting Australian ports. The percentage is based on the number of "eligible" ships visiting Australian ports during a given year. For this purpose an "eligible" ship means one that has not been inspected by AMSA during the six months (three months for tankers of 15 years of age or over, and passenger ships) immediately preceding the date of arrival at an Australian port. In achieving this inspection level, eligible ships are selected for inspection on the basis of assessed risk that a particular ship would be found unseaworthy, with higher risk eligible ships taking precedence. The latest developments in AMSA's risk-based approach to selection of ships for inspection are outlined later in this report.

AMSA conducts all PSC inspections in accordance with international guidelines and within the limitations of its authority under modern administrative law. Surveyors are guided by a set of Instructions to Surveyors (ITS) and a Ship Inspection manual, which are based on a number of resolutions promulgated by both the IMO and ILO. These instructions and manuals form part of the AMSA management system. Consistency, uniformity and objectivity are the keys to a successful and credible PSC program. AMSA continually strives to enhance performance in these areas to ensure that Australia's PSC program continues to gain credibility from both



Australian interests and from foreign stakeholders. To this end, AMSA directs considerable resources to training, and a structured training scheme requires all newly recruited AMSA surveyors to receive PSC training at the commencement of their service with AMSA while existing surveyors are given periodic refresher training.

AMSA also understands the need for surveyors to get access to various up-to-date reference materials so that they can properly perform their duties. The availability of advanced information technology has enabled an AMSA internal website to be put in place with facilities for surveyors to search, browse and print reference documents and materials when necessary. Reference material, such as *Navigation Act 1912*, Marine Orders, international maritime conventions, IMO resolutions and circulars are now easily accessible on the AMSA internal website. In addition to facilitating surveyors to undertake their duties more efficiently, this also contributes in providing controlled and reliable versions of up-to-date reference material.

AMSA also operates an external website at [www.amsa.gov.au](http://www.amsa.gov.au) for the interest of other parties. Port State control information available here includes topics such as statistics, annual reports, focused inspection campaigns and up-to-date monthly ship detention lists. During 2002 it is also hoped to provide access for interested parties to AMSA's ship inspection database through this website.

AMSA is always conscious of the need to continually monitor its PSC activities to ensure it is performing in the most effective and efficient manner. The PSC auditing program plays a vital role in monitoring AMSA surveyors' PSC inspection activities. All AMSA surveyors are subjected to periodic audits. The ultimate goal is that all AMSA surveyors properly follow AMSA procedures when conducting PSC inspections in a consistent and uniform manner.

The PSC Ship Inspection Record (SIR) Book formalises the standard of AMSA marine surveyors' approach towards PSC inspections. It also enables surveyors to utilise their professional judgement to determine the extent to which a ship needs to be inspected. The booklet, recently revamped to include tanker inspection details,

provides a user-friendly document to record all aspects of a PSC inspection. The booklet also forms the basis for information to be transferred to the AMSA ship inspection database, and from there to the Asia Pacific Computer Information System, operated by the Tokyo MOU.

AMSA holds the view that the combination of a surveyor's professionalism and expertise and the standard initial inspection guidelines are both critical to the continuing success of its PSC program.

As advised in the 2000 Annual PSC Report, a focused inspection campaign (FIC) began on 1 December 2000. Under this program, specific areas of a vessel's operation that have been identified by AMSA as requiring special attention are targeted for inspection during PSC and random ship visits. Details on the findings of the focused inspection campaign during 2001 are collated later in this report.

## Flag State Inspections in Australia

Australia has delegated statutory surveys required under the various maritime conventions for ships under its flag to Classification Societies ("Recognised Organisations") with which it has an agreement. Several strategies are employed by AMSA to ensure that Australian flagged ships continue to meet the necessary standards:

- AMSA carries out periodical audits on the Recognised Organisations with which it has an agreement to carry out surveys.
- AMSA has retained sole responsibility as the Administration in the terms of the ISM Code. This includes carrying out the audits necessary to verify compliance with the ISM Code on Australian ships.
- AMSA also maintains an inspection regime for Australian-flagged ships under its jurisdiction. Inspections are carried out at six monthly intervals, or three monthly for tankers over fifteen years of age, and passenger ships of any age. Flag State inspections not only cover the same areas as PSC inspections, but also incorporate the requirements of AMSA's role as the Inspectorate under the *Occupational Health and Safety (Maritime Industry) Act 1993*. Should an Australian-flag ship be found unseaworthy during such an inspection, it would be detained in the same manner as a PSC inspection.



## Port State Control - International Perspective

### Regional Port State Control

Success and experience gained from member states which are participating in the various Memorandums of Understanding (MOU) on port State control, has confirmed that more effectiveness can be gained from regional cooperation. The IMO Assembly Resolution A.682 (17) "Regional Cooperation in the Control of Ships and discharges" recognises this fact. Identification of unsafe ships and rectification of serious defects before departure has led to reduced risks posed by substandard ships around the world.

Since the Paris MOU entered into effect in the early 1980s and the IMO adopted resolution A.682 (17), port State control has gradually made significant developments. These have been achieved through the dedicated commitments of responsible maritime Authorities implementing port State control activities. Port State control is now widely accepted as a major driving force in maritime safety and an effective method for combating the risks posed by substandard ships.

At present there are eight regional PSC agreements in existence, namely:

- The Paris Memorandum of Understanding on port State control (Paris MOU);
- The Latin America Agreement (Acuerdo de Vina del Mar);
- The Memorandum of Understanding on port State control in the Asia-Pacific region (Tokyo MOU);
- The Memorandum of Understanding of port State control in the Caribbean region (Caribbean MOU);
- The Memorandum of Understanding on port State control in the Mediterranean region (Mediterranean MOU);
- The Indian Ocean Memorandum of Understanding on port State control (Indian Ocean MOU);
- The Memorandum of Understanding for the West and Central African region (Abuja MOU); and
- The Memorandum of Understanding on port State control for the Black Sea (Black Sea MOU).

Australia is an active member of both the Indian Ocean MOU and the Tokyo MOU.

## Significant Developments in 2001

### Focused Inspection Campaign

Since 1 December 2000, a Focused Inspection Campaign (FIC) has been running in phases, lasting four months. Each phase focuses on a specific area of concern.

The aim of the inspections, using a standard checklist and guidelines, is to ensure vessels are fully compliant in the particular area of focus. Australia targets the particular areas, on the basis of port State control inspection statistics, that clearly indicate areas requiring special attention. Using Marine Notices, each focus of the campaign and the timeframe, is advised to the marine industry one month prior to the start of the phase.

When a deficiency is detected under the FIC, rectification is required, in the same manner as that required for a port State control deficiency. If the deficiency detected renders the vessel unseaworthy, this then forms clear grounds for the surveyor to undertake a full port State control inspection. The detailed results are then recorded and the vessel detained in accordance with AMSA's port State control procedures. The results of all focused inspections are also entered into the AMSA ship inspection database.

Results of the campaigns completed during 2001 are shown below. More detailed analysis can be found on the AMSA's 'Focused Inspection Campaign' website at [www.amsa.gov.au/amsa/ship.htm](http://www.amsa.gov.au/amsa/ship.htm).

### Phase 1 - Bridge visibility / Collision avoidance

Between December 1 2000 and March 31 2001, AMSA surveyors inspected 1057 vessels of which 132 (12% of those inspected) had defects in the following areas:

- Visibility from the ship's bridge accounted for 4% of the deficiencies recorded.
- Radar operations accounted for 11% of deficiencies.
- However, navigation light defects and problems with their visibility accounted for 85% of the deficiencies recorded. The high percentage of defective lights was primarily due to lack of maintenance.

Two vessels warranted detention for aspects of this focused inspection campaign.

## **Phase 2 - GMDSS**

Internationally, there have been many false distress alerts made using ships' GMDSS equipment, and this category has been a common reason for detention in Australia. From April 2001 to the end of July 2001, therefore, the focus was on Global Maritime Distress and Safety System (GMDSS) equipment installed on ships and operator competence with use of this equipment. During this phase in Australia, AMSA surveyors recorded 465 defects in the 1114 vessels visited during the campaign. This amounts to 42% of the vessels inspected.

Key concerns were the ability of the crew, though holding suitable and valid qualifications, to use the equipment. This area accounted for 54% of the deficiencies recorded.

To support the operation of a GMDSS system, appropriate supplies, such as publications, handbooks and spare parts need to be available on board. This accounted for 36% of the deficiencies.

Nine vessels were detained as a result of defects in relation to this campaign.

## **Phase 3 - Crew Living conditions / STCW95**

Due to concerns over the living conditions of crews on ships, and the impending final implementation date of the International Convention on the Standards of Training, Certification and Watchkeeping, 1978 as amended in 1995 (STCW 95), the focus was on these areas from 1 August 2001 through to 30 November 2001. The STCW 95 focus was intended partly as tool to raise awareness of the ending of the transitional period (1 February 2002) allowed under the Convention. During this phase 1025 ships were inspected and 124 ships recorded deficiencies relating to crew living conditions, with 78 vessels also recording deficiencies relating to STCW 95 issues. The percentages were 12% and 8% respectively.

The most prominent areas of deficiencies in crew living conditions related to sanitary facilities and food storage and preparation, while STCW 95 deficiencies related predominantly to officers certification and watch-keeping certificates for ratings.

Of more concern however, was the finding that many ships inspected were manned by officers and crew whose certification was not in compliance with the requirements of STCW 95 that would be in full force after 31 January 2002. There was also a lack of awareness about these requirements and the effect of the end of the transitional period allowed under the Convention. Where certification of seafarers did not fully comply with the STCW 95 requirements that would be in force after 31 January 2002, a "letter of warning" was issued to the ship. 313 such letters were issued, indicating that 30% of ships were crewed by seafarers whose certification was not in full compliance with STCW 95.

The issue was later recognised by IMO, which issued a circular (STCW95.7/Circ 12) recommending that Port State control officers issue letters of warning after 1 February 2002 in such cases rather than detain ships for these deficiencies.

No ships warranted a detention resulting from the items inspected under the Focused inspection Campaign.

## **Phase 4 - Cargo Management**

From 1 December 2001 and continuing on to 30 March 2002, the focus changed to Cargo Management. The campaign is divided into two areas, general/container and dry bulk and will examine aspects of cargo management required by SOLAS.

## **New Ship Inspection Database**

Over the last 2 years, AMSA has been redeveloping its ship inspection database. The new system, Shipyys2000, was developed with a graphical user interface and combines with the previously separate database for marine incidents.

The new system also records centrally, for the first time, all port arrivals and draws on the risk management statistical analysis of ship seaworthiness to allocate a risk factor to all arrivals of ships that are eligible for inspection. The system also records many other inspection types apart from Port State Control.

A comprehensive range of reports is available from the new system, and a mobile capability is built in. In the

future this facility will allow AMSA Surveyors to download data onto notebook computers, issue inspection documentation at remote ports or onboard ship and upload data from such locations to the central system by modem or mobile phone links.

This system was commissioned in November 2001, and further developments may include work allocation systems to allow ships that are making multiple port visits on a voyage to Australia to be inspected at the most convenient port, rather than, say, at the first port of call.

Shipsys2000 also has a daily internet upload and download with the ship inspection database of the Tokyo MOU, located in Vladivostok, Russia, to ensure that AMSA Surveyors have timely access to all ship inspections undertaken by the seventeen member states.

During 2002, AMSA will be making much of its ship inspection data available via the internet. This will also allow interested parties to download files with customised ship inspection data summaries.

### **Asia-Pacific Regional Cooperation on Port State Control**

On the 1st of April 1994 the Memorandum of Understanding on port State control (Tokyo MOU) entered into effect for the major maritime nations in the Asia Pacific region. As a signatory, Australia has embodied the principles of the MOU by maintaining an effective system of port State control with the view to ensuring that, without discrimination, foreign vessels that visit Australian ports comply with the appropriate international standards.

The Tokyo MOU Committee held their tenth port State control meeting at Tokyo, Japan, between the 15th and 18th of October 2001. Two delegates from Australia attended. The Committee discussed a wide range of issues relating to harmonisation and enhancement of PSC procedures along with technical cooperation programs and administrative and financial matters. In an effort to harmonise PSC procedures, the Committee tasked one inter-sessional group to incorporate some of the contents of the Paris MOU manual into the Tokyo MOU manual. Similarly, the Committee established an inter-sessional group tasked with developing an

inspection targeting system for the region that is closely in harmony with the Paris MOU system. Australia was asked to lead this group.

Additionally, the Committee initiated a Concentrated Inspection Campaign (CIC) on ISM Code implementation, scheduled for July-September 2002, to be carried out in conjunction with the Paris MOU countries and United States Coast Guard. Australia is to coordinate the CIC for the Asia-Pacific region on behalf of the Committee.

Australia is an active participant in the activities of the MOU Committee and associated advisory groups. These groups provide advice to the Committee on such issues as training of PSC officers, updating of PSC manuals and procedures in order to conform to international requirements, and the transfer of PSC information between members.

Australia will attend the eleventh Port State Control Committee meeting scheduled for June 2002 in Manila, Philippines.

### **Indian Ocean Regional Cooperation on Port State Control**

Australia became a signatory to the Indian Ocean Memorandum of Understanding (IOMOU) in January 1999, and it came into effect on the 1st of April that year. As with the Tokyo MOU, members of the Indian Ocean MOU endeavour to maintain an effective system of port State control in the Indian Ocean region.

Members of the Indian Ocean MOU include Australia, Eritrea, India, Iran, Maldives Mauritius, South Africa, Sri Lanka, Sudan and Tanzania. The Secretariat for the MOU is located in Goa, India.

The Indian Ocean MOU Committee held their fourth port State control meeting at Colombo, Sri Lanka, between the 3rd and 6th of September 2001. At that meeting, decisions were made to establish a web site for the MOU and make further investigations into establishing a ship inspection database for the member's use. Members also elected AMSA's Manager, Ship Inspections as Chairman for the ensuing year. Iran is set to host the next Indian Ocean MOU Committee meeting, tentatively set down for October 2002. AMSA will attend the meeting.

### Developments in Ship Inspection Risk Management

AMSA has 14 offices around the Australian coastline that service many ports. In recent years, Port State Control inspections have been undertaken at about 65 ports, some of which are quite remote. The geographical dispersal of these ports means that choices must be made about which ports to visit and which ships to inspect, as not all ports can be covered at all times.

In 2000, AMSA commenced detailed statistical analysis of its ship inspection records since 1995 with a view to identifying those characteristics of ships that could be used as predictive factors for risk-ranking those with a higher likelihood of being unseaworthy. The aim was to use the results of this analysis to allow ships arriving at Australian ports to be allocated a risk rating, with this to be considered by AMSA's Marine Surveyors together with their "local knowledge" of the ship in question when deciding which ships to inspect and which ports to visit on a given day.

The results of this analysis indicated that ship age was a very important factor in predicting the likelihood of a ship being detained. The influence of other factors was also analysed, such as a ship's type, Flag State, Classification Society, prior inspection history (where applicable) and time since special survey, to see if they were useful predictive factors.

The results of this initial analysis were considered to be sufficiently robust to be used in AMSA's Ship Inspection Decision Support System (SIDSS) to allocate risk ratings to each arrival of ships that are eligible for inspection. This was only the start of this risk management process, as there was much scope for further refinement and extension of the initial analysis.

In 2001, considerable further analysis was undertaken, and work by consultant statisticians was commenced with the aim of identifying the significance of certain other factors and objectively ranking the relative importance of those factors that are found to have a statistically significant relationship to the probability of a ship being detained for being unseaworthy.

### Characteristics of Low and High Risk Operators

In addition to these efforts aimed at determining the significance or otherwise of individual characteristics

of ships, a study was undertaken to determine whether there were any useful indicators that could be identified by comparing the profiles of operators with unusually high detention rates with the profiles of those operators with very low detention rates - ie; proven high risk and low risk operators.

The average detention rate of ships inspected between 1995 and 2000 was a little over 6%. Low risk operators were considered to be those with a zero detention rate over this time, while high risk operators were considered to be those with a detention rate of 12% or higher. Operators with less than 30 inspections over the time frame in question were excluded from the analysis to ensure there was sufficient history to allow a valid analysis.

The overall summaries of these two groups of operators are as follows:

|                  | Number of Operators | Number of Inspections | Average Detention Rate |
|------------------|---------------------|-----------------------|------------------------|
| <b>Low Risk</b>  | 20                  | 1100                  | 0%                     |
| <b>High Risk</b> | 11                  | 580                   | 14.6%                  |

As previous analysis had established a clear relationship between ship age and detention rates, the age profiles of the fleets of the low and high risk operators were identified to see if the high risk operators used much older ships. The comparative age profiles were as shown in Figure 1.

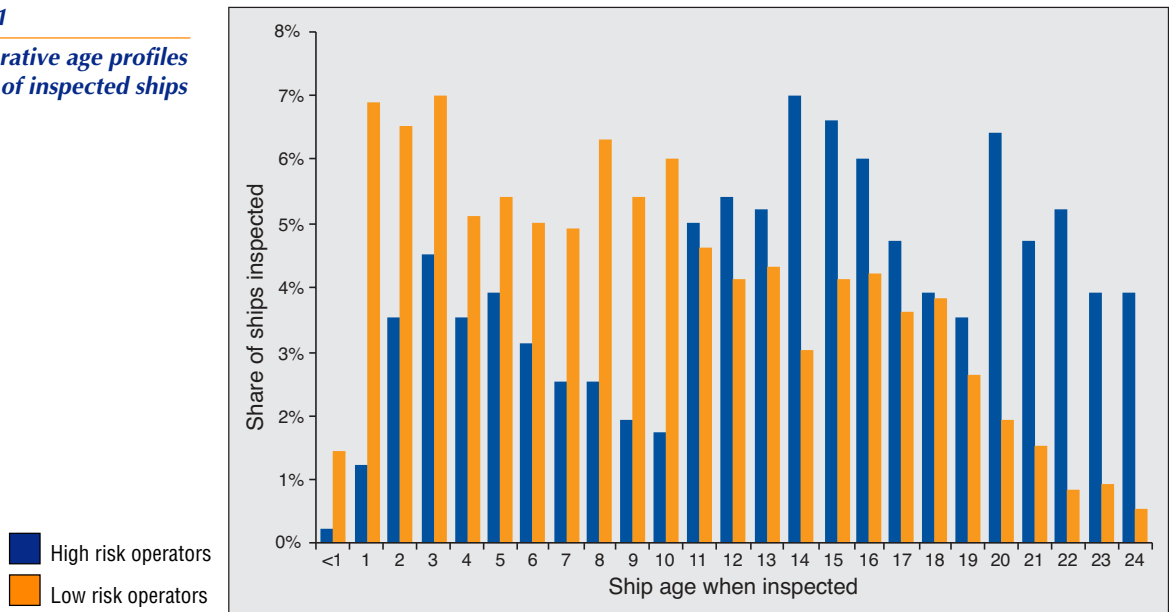
As would be expected, these age profiles indicate that the high risk operators' tended to have older ships than low risk operators.

The comparative profile of ship types for each of the two groups are shown in Figure 2.

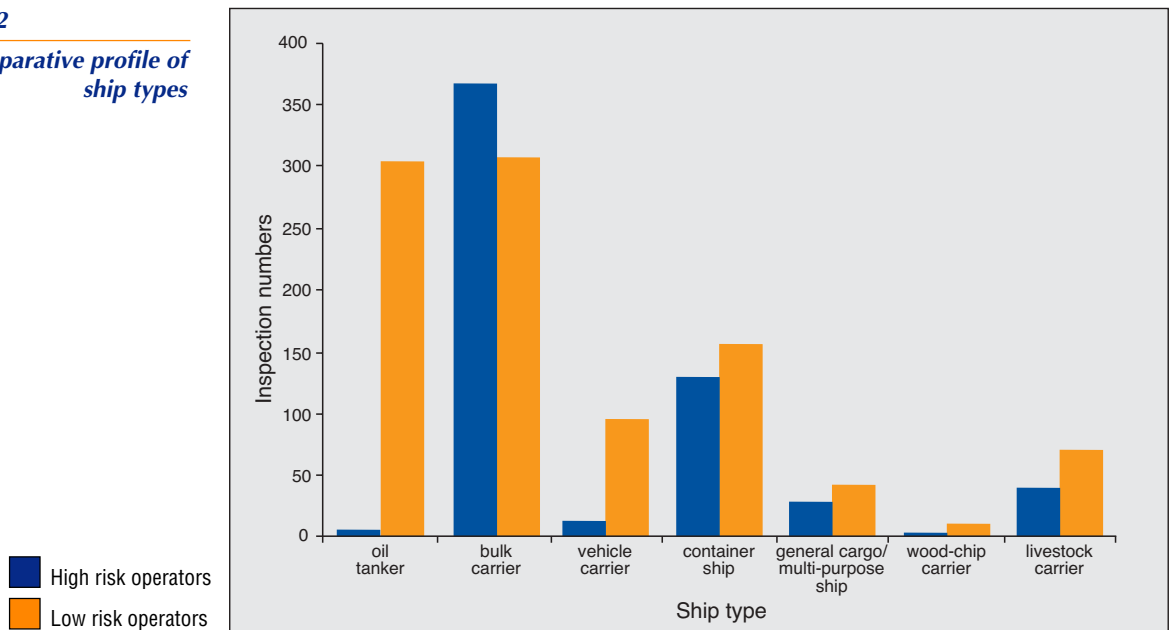
The main differences are that the high risk operators ran very few tankers and few vehicle carriers to Australia and tended to have more bulk carriers. Age of ships for high risk operators was also consistently higher across all ship types.

The next step was to consider the detention rates by age of the high risk operators. As the low risk operators were defined as those with a zero detention rate, the only valid comparison is against the detention rate vs age profile for all operators as shown in figure 3.

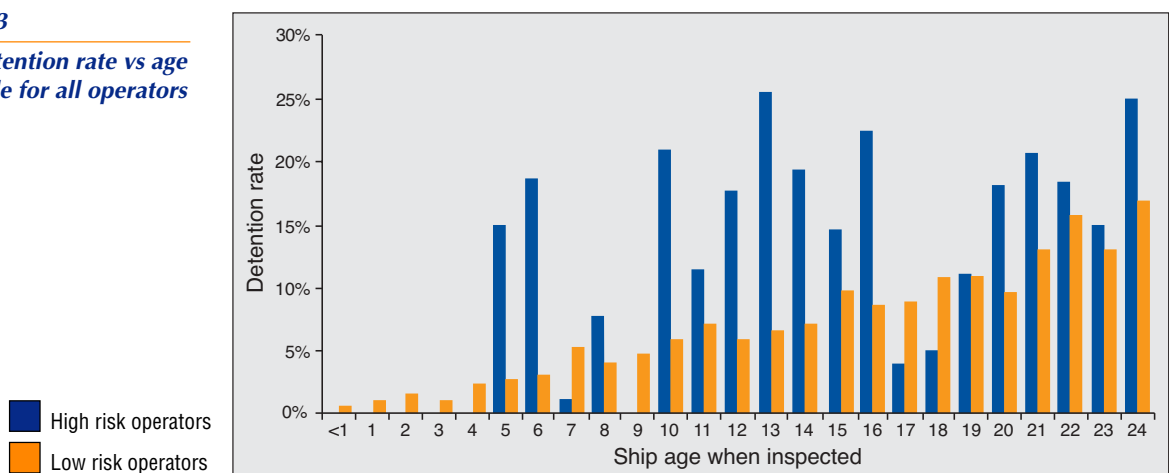
**Figure 1**  
*Comparative age profiles of inspected ships*



**Figure 2**  
*Comparative profile of ship types*



**Figure 3**  
*Detention rate vs age profile for all operators*



This comparison clearly shows that high risk operators have a much higher detention rate once their ships are 5 years of age or more. This suggests a general attitude of neglect. This confirms that age is still a valid factor for identifying higher risk ships.

The detention rates for each ship type were also compared which indicated that high risk operators had high detention rates across most of the ship types that they operated.

Analysis then focused on specific ship characteristics to see if the high risk operators had different profiles of Flag or Classification Society from low risk operators; eg, do high risk operators use Flags or Classification Societies that are internationally regarded as being higher risk.

Firstly, considering Flag profile, while there are some differences in the two profiles, there is not a clear trend of high risk operators using Flags that are generally regarded as higher risk. For example, low risk operators make use of some open registers, which are also utilised by high risk operators. This suggests that it would be difficult to use flag as a predictor of high risk operators.

Classification Society profiles for high and low risk operators were compared, once again, although there are some differences, high risk operators were often classed by the major societies also used by low risk operators. This may make it difficult to use Classification Society as a predictor for identifying higher risk ships.

Overall, while there are some clear differences in the ship type, Flag and Classification Society profiles of low risk and high risk operators, there are no factors that can be strongly associated with high risk operators, other than that they tend to have older ships and tend to have much higher detention rates once their ships exceed 5 years of age.

As there has been a decline in annual detention rates since 1995, the year by year detention rates for the high risk operators was also identified, see Figure 4.

This shows that there has been some improvement by these operators over time. In fact, this improvement is greater than indicated by the overall results, as seven of the eleven high risk operators had a zero detention rate in 2000, leaving only four “problem” operators.

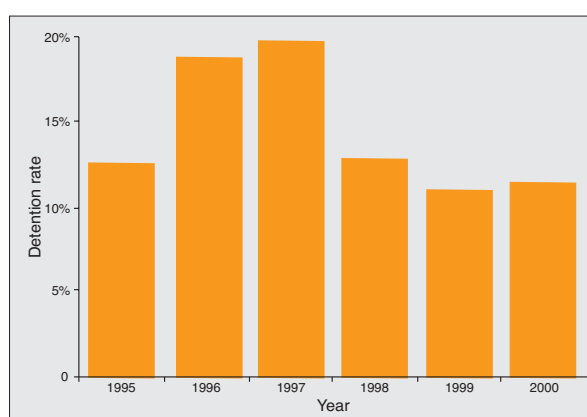
Further analysis will be undertaken in 2002 to determine the extent to which the operator can be used as a predictor for ship seaworthiness.

### Deficiency Types Leading to Detentions

Another study was undertaken to identify the profile of deficiencies found and the relationship between detentions and the types of deficiencies that were considered to have rendered the ship unseaworthy.

About 40% of all ships inspected are found to have no deficiencies. As previous analysis has established that there is a strong correlation between ship age and detention rates, the age profile of ships with deficiencies was identified, which showed that only about one in three ships of less than 5 years age are found to have deficiencies, whereas nearly four out of five ships over 10 years of age have deficiencies.

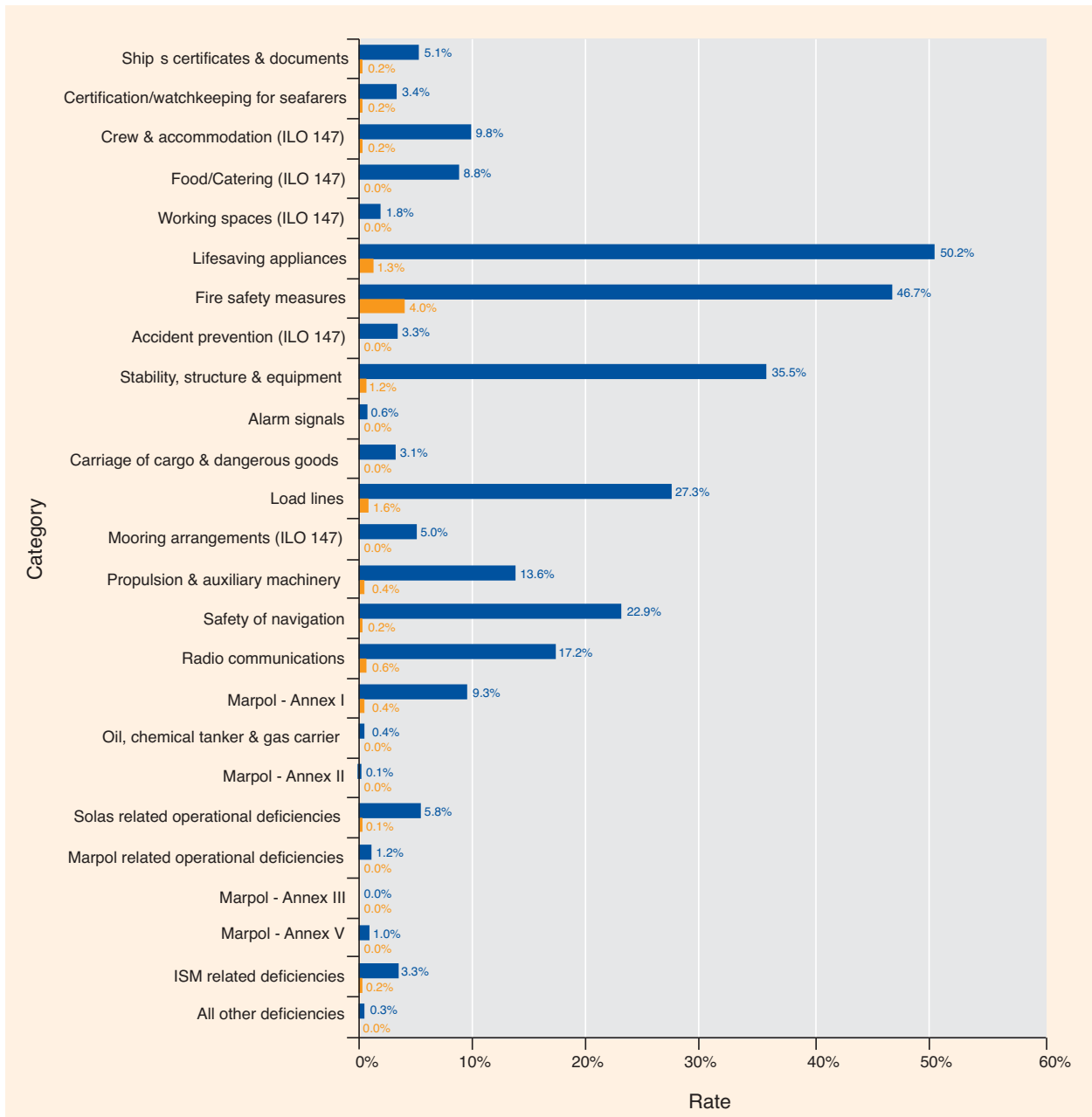
The rate of occurrence of each deficiency type and the rate that each deficiency type resulted in the detention of a ship were then identified, these figures are shown in Figure 5.



**Figure 4**

*Annual detention rates for high risk operators*





■ Deficiency rate  
■ Detention rate

**Figure 5**  
*Deficiency and detention rates by type*

The frequency with which each type of deficiency arises can point to areas that need to be given appropriate attention and can identify areas where perhaps more focus should be applied during inspections.

The age profile of the most common types of deficiencies was identified and provided an indication of when these types of deficiency tend to occur. This could be used to tailor inspections more precisely. The age profile of ship detentions for stability/structure reasons is shown in figure 6.

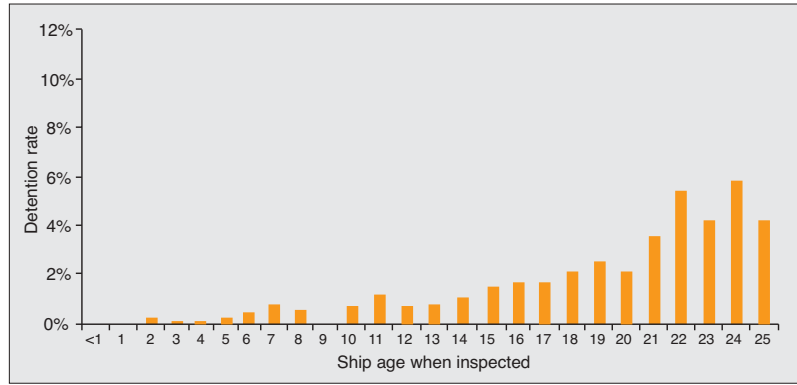
The age profile of detentions for deficiencies with Fire Safety Measures are shown in Figure 7.

The age profile of Loadline related detentions was a little different as shown in Figure 8.

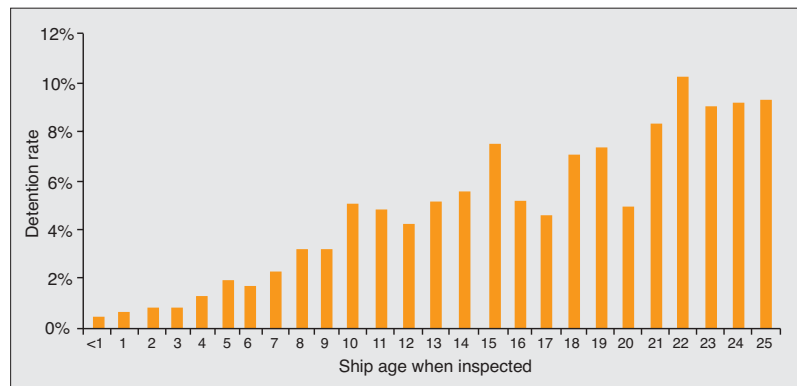
Comparison of the above three age profiles indicates that detentions due to fire safety measures are likely to occur earlier in a ship's life than structural or Loadline issues.

The statistical analysis of inspection data has guided improvements in the effectiveness of AMSA's PSC inspection program, such as by identifying changes needed to the geographical distribution of Marine Surveyors to ensure that they are located where they can provide better coverage of those ports that tend to receive higher risk ships.

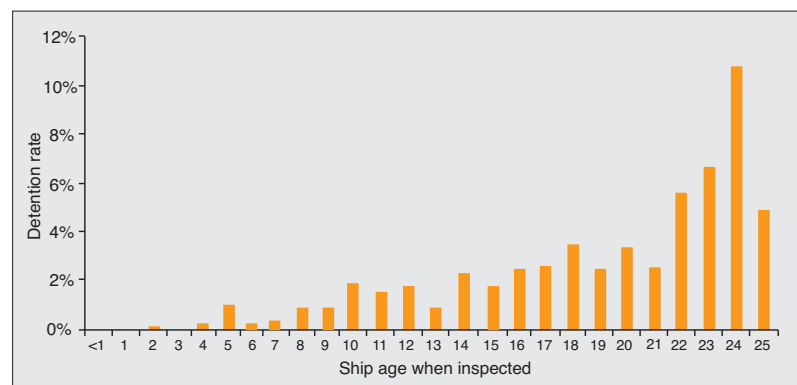
Additional analysis of deficiencies and other factors, such as operator histories, is planned for 2002 with a view to refining the methods of identification of higher risk ships.



**Figure 6**  
*Stability/structure detention rate by ship age*



**Figure 7**  
*Fire safety measures detention rate by ship age*



**Figure 8**  
*Loadlines detention rate by ship age*

## 2001 PORT STATE CONTROL INSPECTIONS

### Inspections

During the year 2001, 2913 inspections were carried out on ships registered under 61 foreign flags. Additionally, 94 inspections were carried out on ships under the Australian flag. Table 1 gives the number of inspections carried out in each port during the past five years.

Figure 9 shows the annual number of inspections for the past five years. It can be seen that between 1997 and 2001, AMSA maintained an annual average of more than 2900. For 2001, AMSA records show the number of ships inspected to be 54% of the eligible ships calling to Australian ports.

The number of ships inspected from each Flag State is listed in Table 2.

The types of ships inspected are summarised in Table 3. Bulk carriers still constituted the majority of inspections by ship type at 60.3%

Figure 10 shows the percentage of inspections by ship type.

### Detentions

A ship is detained under the Navigation Act when the deficiencies observed during an inspection are considered by the inspecting surveyor to render the ship unseaworthy or substandard.

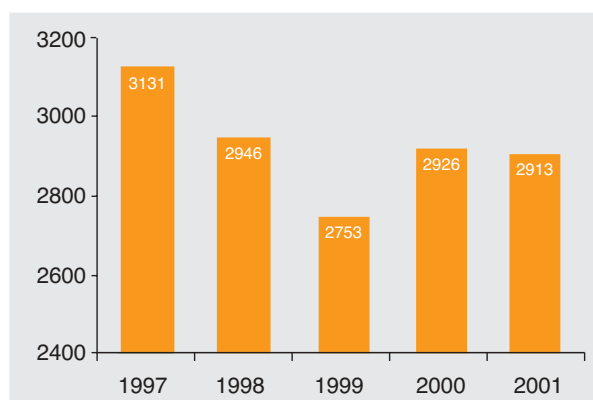
When intervention action is taken to detain a ship, AMSA follows the international convention requirements of informing the ship's flag State and the appropriate organisation that issued the ship's statutory certificates relevant to the detainable deficiencies. Details of the intervention are subsequently reported to the IMO.

A ship is not deemed to be seaworthy under the Navigation Act unless:

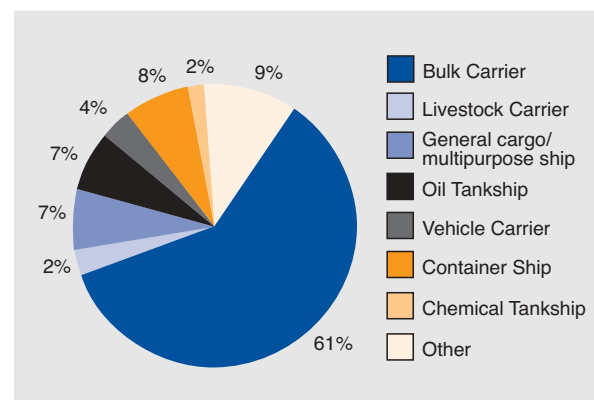
- it is in a fit state as to condition of hull and equipment, boilers and machinery, stowage of ballast or cargo, number and qualifications of crew including officers, and every other respect, to encounter the ordinary perils of the voyage then entered upon; and
- it is not overloaded.

Under the Navigation Act a substandard vessel is one where conditions on board the ship are clearly hazardous to safety or health, despite the vessel being technically "seaworthy".

Serious deterioration of the hull structure, overloading or defective equipment such as life saving, radio and fire-fighting appliances would be considered causes to render a ship unseaworthy. Vessels which seriously breach the provisions of Marine Orders Part 11 (Substandard Ships), which implements the spirit of ILO147, may also be detained if considered to be a safety or health hazard. AMSA marine surveyors use their professional judgement to determine if a ship should be detained under the Navigation Act.



**Figure 9**  
Number of inspections



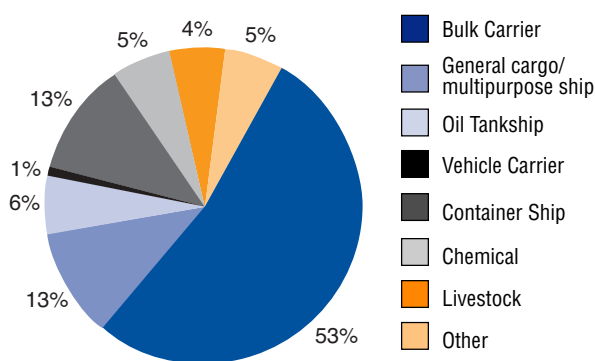
**Figure 10**  
Percentage of inspections by ship type

In 2001, 127 ships registered under 34 foreign flags were observed to have deficiencies sufficiently serious to impair their seaworthiness and warrant detention. Additionally, one Australian flagged ship was detained. Table 5 gives the number of ships inspected and detained according to flag. The detention rate when expressed as a percentage of the total number of ship inspections was 4.36%

In 2000, a 4.3% detention rate was achieved being the lowest percentage recorded since 1994 (See table on page IV). The year 2001 figure of 4.36% exhibits a slight increase in rate compared with the previous year. This may be attributed to the effects of improved targeting of high-risk ships for inspection and the Focused Inspection Campaign (FIC) carried out over the past twelve-month period. AMSA believes the continuing low detention rate gives tangible evidence of success of its PSC activities.

In Figure 11, the type of ship detained, is shown as a percentage of the total number of ships detained. Of some concern here is the performance of chemical tankers, 2% of ships inspected, but 5% of detentions. Also, general cargo/multipurpose ships which while making up only 7% of total ships inspected, provided 13% of all detentions, and container ships, making up 8% of all inspections but 13% of detentions.

Total ships inspected and resulting detentions, by type of ship, are tabulated in Table 4 and total ship inspections and resulting detentions by classification society are shown in Table 6.



**Figure 11**  
*Detention percentage by ship type*

## Deficiencies

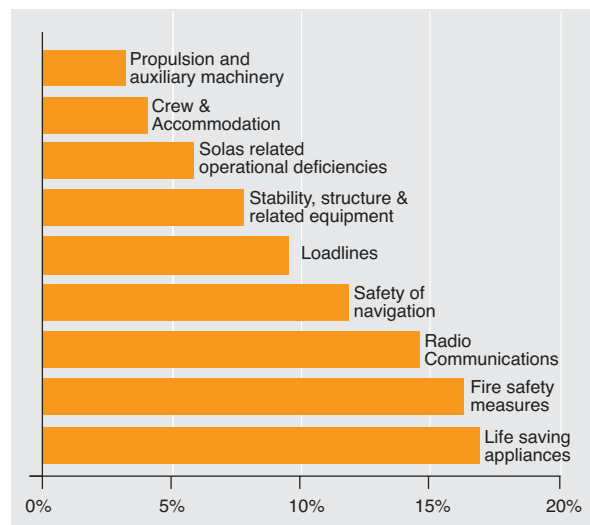
A deficiency is recorded when the condition of a ship's hull or its equipment and machinery does not conform to the requirements of relevant IMO safety or pollution prevention conventions or where hazards to the health or safety of the crew exist which are considered to be in breach of ILO conventions.

Deficiencies arise from:

- the absence of either equipment or approved arrangements required by conventions;
- non-compliance of equipment or arrangements with the appropriate specifications of the relevant convention;
- substantial deterioration of the ship or its equipment, such as life-saving appliances, fire-fighting equipment or radio equipment; and
- wastage or cracking of the ship's structure.

The 8818 deficiencies observed on ships in 2001 are categorised in Table 7. Figure 12 shows the major categories of deficiencies as a percentage of the total deficiencies.

Relatively minor deficiencies are found on many ships. These may not pose an immediate hazard to the safety of the ship or its crew or passengers. In such cases sufficient time is allowed for rectification at the discretion of the surveyor, taking into account factors such as the nature of the deficiency, availability of facilities for repairs in the inspection or destination ports, and level of risk the deficiency poses.



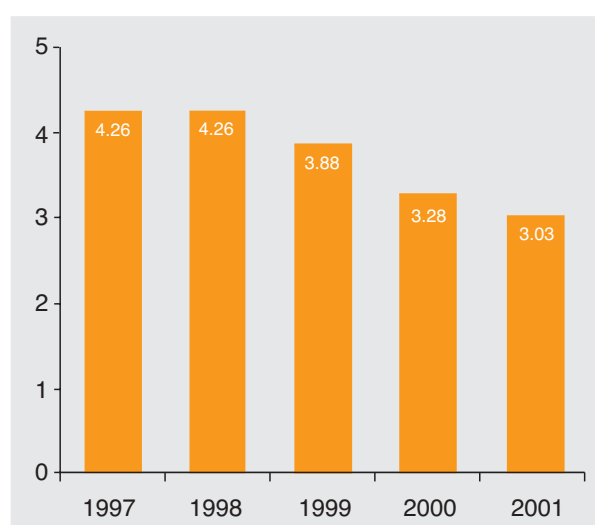
**Figure 12**  
*Major categories of deficiencies*

Details of all deficiencies have been recorded in this report even though, when viewed in isolation, some may be considered as relatively minor.

While there was a decrease of only 13 ship inspections in 2001 compared with that of 2000, the total number of deficiencies in fact decreased by nearly 800. The average number of deficiencies per inspection was 3.03, resulting in a 0.25 deficiency point improvement. Figure 13 shows the annual average number of deficiencies per inspection for the period 1997-2001. This indicates an improvement over time in the standard of the shipping entering Australia.

Fire-fighting equipment and life-saving appliances are still the major items where most deficiencies were found. Their combined portion in the total number of deficiencies however has dropped from 33% last year to 30.7% in 2001.

Loadline deficiencies have also dropped quite significantly in the last five years. In 1997, 1424 deficiencies were detected compared with 770 in the last period. The drop of 46% in this category compares favourably against the drop across all categories of 34%. Such an improvement may be attributable to improved maintenance of such areas being fostered by implementation of the International Safety Management Code.



**Figure 13**

**Average number of deficiencies per inspection**

While there was a general downward trend in the number of deficiencies found in the majority of deficiency categories, it is noted that for certain specific categories the figures have gone in the opposite direction. During the past five years, there was an upward trend in the number of deficiencies related to navigation equipment, radio items and SOLAS operational requirements.

On 1st December 2000, AMSA started running a Focused Inspection Campaign on safe navigation and collision avoidance arrangements, which ran for four months. This campaign resulted in identifying more navigation type deficiencies in the short term but is hoped will also lead to a long term turn-around in the rising trend of defects in this area. Navigational equipment deficiencies in 1997 were 884 but in 2001 this number rose to 934, attributable to the campaign. This area will be monitored in the future to see if further focussed action is warranted.

Table 8 shows the number of deficiencies noted in major areas under the navigation deficiencies category and their corresponding percentages.

Both SOLAS and MARPOL contain specific provisions on control of operational requirements, and AMSA surveyors have expanded their inspections from traditional checks of the physical condition of a ship and its equipment to also include the ship's crew's competence and familiarity with the safety and pollution free operation of their ships. A majority of deficiencies identified under the category of "SOLAS operational" are found to be related to "abandon ship drills" and "muster list" which are important elements of ship safety in the event of a mishap on board. The number of SOLAS operational type deficiencies has had a more than three-fold increase between 1996 and 2001, and jumped from 275 in 2000 to 478 in 2001. A significant number of these (100) are listed as "operation of GMDSS equipment" and once again these are accentuated by results of AMSA's Focused Inspection Campaign. The sharp increase in "radio" category in 2001 to 1206 from 849 in 2000 can also be attributed to this.

Table 9 shows the number of deficiencies noted in the major areas under the SOLAS operational category and their corresponding percentages.

**Table 1 - Total number of inspections by port**

| Port                    | Number of Inspections |      |      |      |      |
|-------------------------|-----------------------|------|------|------|------|
|                         | 1997                  | 1998 | 1999 | 2000 | 2001 |
| Abbot Point             | 23                    | 11   | 11   | 12   | 6    |
| Albany                  | 7                     | 5    | 6    | 9    | 9    |
| Ardrossan               | 4                     | 5    | 4    | 5    | 3    |
| Barrow Island           | 0                     | 0    | 0    | 1    | 0    |
| Barry Beach             | 1                     | 2    | 6    | 2    | 2    |
| Bell Bay                | 27                    | 20   | 27   | 22   | 28   |
| Bing Bong Creek         | 0                     | 2    | 0    | 1    | 0    |
| Brisbane                | 189                   | 180  | 181  | 200  | 252  |
| Broome                  | 0                     | 0    | 0    | 1    | 1    |
| Bunbury                 | 50                    | 50   | 46   | 66   | 60   |
| Bundaberg               | 6                     | 2    | 1    | 4    | 3    |
| Burnie                  | 8                     | 6    | 4    | 8    | 9    |
| Cairns                  | 20                    | 15   | 15   | 20   | 28   |
| Cape Cuvier             | 0                     | 0    | 0    | 2    | 0    |
| Cape Flattery           | 0                     | 1    | 0    | 0    | 2    |
| Christmas Island        | 1                     | 0    | 1    | 1    | 0    |
| Cockatoo Island         | 0                     | 0    | 0    | 0    | 0    |
| Dampier                 | 301                   | 263  | 198  | 255  | 255  |
| Darwin                  | 81                    | 93   | 89   | 78   | 65   |
| Derby                   | 0                     | 0    | 1    | 0    | 0    |
| Devonport               | 4                     | 1    | 1    | 4    | 4    |
| Eden                    | 1                     | 4    | 3    | 1    | 0    |
| Esperance               | 19                    | 7    | 12   | 15   | 13   |
| Exmouth                 | 0                     | 0    | 0    | 0    | 0    |
| Fremantle               | 68                    | 115  | 93   | 86   | 119  |
| Geelong                 | 139                   | 97   | 95   | 117  | 122  |
| Geraldton               | 8                     | 12   | 3    | 16   | 21   |
| Gladstone               | 107                   | 71   | 121  | 139  | 178  |
| Gove                    | 21                    | 24   | 13   | 12   | 25   |
| Groote Eylandt          | 7                     | 3    | 9    | 7    | 8    |
| Hay Point/Dalrymple Bay | 174                   | 130  | 149  | 126  | 173  |
| Hobart                  | 6                     | 10   | 5    | 4    | 4    |
| Karumba                 | 2                     | 2    | 6    | 9    | 3    |
| Kurnell                 | 21                    | 22   | 21   | 20   | 11   |
| Kwinana                 | 179                   | 223  | 208  | 201  | 185  |

| Port                    | Number of Inspections |             |             |             |             |
|-------------------------|-----------------------|-------------|-------------|-------------|-------------|
|                         | 1997                  | 1998        | 1999        | 2000        | 2001        |
| Lucinda                 | 0                     | 1           | 0           | 4           | 3           |
| Mackay                  | 29                    | 35          | 18          | 8           | 23          |
| Melbourne               | 222                   | 191         | 172         | 155         | 137         |
| Mourilyan               | 10                    | 9           | 7           | 8           | 7           |
| Newcastle               | 357                   | 330         | 296         | 342         | 272         |
| Offshore Floating South | 0                     | 0           | 1           | 0           | 0           |
| Onslow                  | 1                     | 1           | 0           | 0           | 3           |
| Other (West)            | 0                     | 0           | 0           | 0           | 1           |
| Point Wilson            | 1                     | 2           | 2           | 2           | 1           |
| Port Adelaide           | 54                    | 78          | 75          | 77          | 98          |
| Port Alma               | 5                     | 3           | 3           | 5           | 5           |
| Port Bonython           | 4                     | 4           | 5           | 6           | 5           |
| Port Botany             | 150                   | 170         | 158         | 148         | 115         |
| Port Giles              | 4                     | 6           | 4           | 4           | 7           |
| Port Hedland            | 143                   | 144         | 127         | 173         | 154         |
| Port Kembla             | 183                   | 148         | 132         | 150         | 120         |
| Port Latta              | 0                     | 3           | 4           | 3           | 1           |
| Port Lincoln            | 13                    | 19          | 14          | 10          | 7           |
| Port Pirie              | 15                    | 16          | 13          | 9           | 13          |
| Port Stanvac            | 14                    | 14          | 13          | 20          | 19          |
| Port Walcott            | 90                    | 68          | 52          | 71          | 49          |
| Portland                | 34                    | 26          | 33          | 39          | 33          |
| Saladin Marine Terminal | 0                     | 0           | 0           | 0           | 1           |
| Spring Bay              | 3                     | 2           | 4           | 6           | 6           |
| Sydney                  | 197                   | 191         | 162         | 133         | 121         |
| Thevenard               | 8                     | 8           | 6           | 4           | 6           |
| Townsville              | 67                    | 48          | 61          | 69          | 56          |
| Useless Loop            | 1                     | 1           | 0           | 2           | 4           |
| Wallaroo                | 27                    | 24          | 31          | 13          | 25          |
| Weipa                   | 6                     | 2           | 2           | 7           | 9           |
| Westernport (Hastings)  | 11                    | 15          | 22          | 12          | 17          |
| Whyalla                 | 7                     | 9           | 5           | 2           | 5           |
| Yamba                   | 1                     | 2           | 2           | 0           | 0           |
| Yampi Sound             | 0                     | 0           | 0           | 0           | 1           |
| <b>Total</b>            | <b>3131</b>           | <b>2946</b> | <b>2753</b> | <b>2926</b> | <b>2913</b> |



**Table 2 - Total number of inspections by flag***Note: Flags shown in yellow indicate detentions of ships under that flag during 2001*

| Flag                        | Number of Inspections |      |      |      |      |
|-----------------------------|-----------------------|------|------|------|------|
|                             | 1997                  | 1998 | 1999 | 2000 | 2001 |
| American Samoa              | 0                     | 0    | 0    | 0    | 1    |
| Anguilla                    | 0                     | 1    | 0    | 1    | 0    |
| Antigua and Barbuda         | 28                    | 20   | 18   | 20   | 21   |
| Bahamas                     | 129                   | 131  | 126  | 136  | 138  |
| Bangladesh                  | 0                     | 0    | 1    | 0    | 0    |
| Barbados                    | 4                     | 3    | 2    | 3    | 2    |
| Belgium                     | 0                     | 4    | 0    | 2    | 0    |
| Belize                      | 2                     | 3    | 4    | 7    | 7    |
| Bermuda                     | 24                    | 13   | 19   | 32   | 34   |
| Brazil                      | 3                     | 0    | 2    | 0    | 2    |
| Bulgaria                    | 0                     | 1    | 2    | 1    | 0    |
| Cayman Islands              | 1                     | 7    | 6    | 8    | 10   |
| Channel Islands             | 1                     | 0    | 0    | 0    | 2    |
| China, People's Republic of | 98                    | 75   | 79   | 78   | 53   |
| Cook Islands                | 0                     | 2    | 0    | 0    | 0    |
| Croatia                     | 5                     | 4    | 6    | 5    | 4    |
| Cyprus                      | 109                   | 94   | 108  | 106  | 129  |
| Denmark                     | 48                    | 42   | 38   | 53   | 47   |
| Egypt                       | 19                    | 13   | 7    | 11   | 12   |
| Estonia                     | 2                     | 0    | 0    | 0    | 0    |
| Fiji                        | 1                     | 2    | 1    | 3    | 4    |
| France                      | 18                    | 17   | 17   | 15   | 17   |
| French Polynesia            | 1                     | 0    | 0    | 0    | 0    |
| Germany                     | 34                    | 33   | 22   | 27   | 19   |
| Gibraltar                   | 0                     | 0    | 1    | 1    | 2    |
| Greece                      | 171                   | 127  | 102  | 100  | 109  |
| Honduras                    | 0                     | 0    | 2    | 1    | 0    |
| Hong Kong, China            | 120                   | 118  | 104  | 145  | 159  |
| India                       | 67                    | 49   | 38   | 33   | 35   |
| Indonesia                   | 14                    | 9    | 14   | 10   | 13   |
| Iran                        | 18                    | 30   | 22   | 21   | 31   |
| Ireland                     | 2                     | 0    | 0    | 0    | 0    |
| Isle of Man                 | 25                    | 25   | 26   | 27   | 38   |
| Italy                       | 12                    | 10   | 12   | 14   | 13   |
| Japan                       | 103                   | 68   | 71   | 57   | 69   |
| Jordan                      | 1                     | 0    | 0    | 0    | 0    |
| Kiribati                    | 1                     | 0    | 0    | 0    | 0    |
| Korea, Republic of          | 65                    | 53   | 46   | 46   | 47   |
| Kuwait                      | 7                     | 7    | 9    | 9    | 9    |
| Kyrgyzstan                  | 0                     | 0    | 0    | 0    | 1    |
| Liberia                     | 295                   | 295  | 295  | 248  | 231  |
| Luxembourg                  | 2                     | 0    | 1    | 2    | 1    |

| Flag                             | Number of Inspections |             |             |             |             |
|----------------------------------|-----------------------|-------------|-------------|-------------|-------------|
|                                  | 1997                  | 1998        | 1999        | 2000        | 2001        |
| Malaysia                         | 58                    | 58          | 56          | 66          | 53          |
| Malta                            | 50                    | 51          | 48          | 88          | 73          |
| Marshall Islands                 | 16                    | 14          | 15          | 19          | 28          |
| Mauritius                        | 2                     | 0           | 0           | 0           | 0           |
| Myanmar                          | 11                    | 8           | 3           | 4           | 8           |
| Netherlands                      | 49                    | 69          | 38          | 41          | 41          |
| Netherlands Antilles             | 12                    | 2           | 2           | 3           | 5           |
| New Zealand                      | 12                    | 13          | 11          | 5           | 2           |
| Norway                           | 101                   | 117         | 78          | 75          | 72          |
| Pakistan                         | 1                     | 0           | 0           | 0           | 0           |
| Panama                           | 771                   | 842         | 870         | 954         | 918         |
| Papua New Guinea                 | 9                     | 6           | 7           | 5           | 18          |
| Philippines                      | 184                   | 120         | 99          | 99          | 94          |
| Poland                           | 2                     | 2           | 1           | 0           | 2           |
| Portugal                         | 1                     | 2           | 0           | 0           | 0           |
| Qatar                            | 0                     | 3           | 3           | 0           | 3           |
| Romania                          | 6                     | 2           | 0           | 0           | 0           |
| Russian Federation               | 35                    | 28          | 27          | 24          | 25          |
| Saint Helena                     | 0                     | 0           | 0           | 0           | 1           |
| Saint Vincent and the Grenadines | 53                    | 36          | 24          | 18          | 18          |
| Samoa                            | 0                     | 0           | 0           | 0           | 1           |
| Saudi Arabia                     | 5                     | 5           | 3           | 4           | 4           |
| Singapore                        | 144                   | 146         | 130         | 131         | 129         |
| Slovakia                         | 3                     | 2           | 1           | 0           | 0           |
| Spain                            | 0                     | 0           | 1           | 0           | 0           |
| Sri Lanka                        | 1                     | 2           | 1           | 2           | 2           |
| Sweden                           | 0                     | 5           | 8           | 12          | 9           |
| Switzerland                      | 6                     | 5           | 8           | 10          | 5           |
| Taiwan                           | 52                    | 45          | 47          | 49          | 48          |
| Thailand                         | 18                    | 22          | 16          | 20          | 9           |
| Tonga                            | 4                     | 10          | 5           | 4           | 4           |
| Turkey                           | 39                    | 26          | 16          | 24          | 32          |
| Tuvalu                           | 1                     | 0           | 0           | 0           | 0           |
| Ukraine                          | 10                    | 5           | 0           | 1           | 0           |
| United Arab Emirates             | 4                     | 2           | 2           | 2           | 1           |
| United Kingdom                   | 20                    | 20          | 15          | 21          | 27          |
| United States of America         | 5                     | 1           | 1           | 2           | 6           |
| Uruguay                          | 0                     | 1           | 1           | 0           | 0           |
| Vanuatu                          | 16                    | 20          | 14          | 21          | 15          |
| Others                           | 0                     | 0           | 1           | 0           | 0           |
| <b>TOTAL</b>                     | <b>3131</b>           | <b>2946</b> | <b>2753</b> | <b>2926</b> | <b>2913</b> |

**Table 3 - Total number of inspections by ship type**

| Ship Type                            | Number of Inspections |             |             |             |             |
|--------------------------------------|-----------------------|-------------|-------------|-------------|-------------|
|                                      | 1997                  | 1998        | 1999        | 2000        | 2001        |
| Bulk Carrier                         | 1866                  | 1654        | 1572        | 1723        | 1757        |
| Chemical Tanker                      | 78                    | 86          | 64          | 72          | 65          |
| Combination Carrier                  | 10                    | 13          | 12          | 15          | 22          |
| Container Ship                       | 269                   | 284         | 275         | 239         | 236         |
| Fishing Vessel                       | 0                     | 0           | 1           | 0           | 0           |
| Gas Carrier                          | 79                    | 78          | 61          | 64          | 58          |
| General Cargo/<br>Multi-purpose Ship | 220                   | 182         | 183         | 222         | 196         |
| Heavy Load Carrier                   | 16                    | 7           | 9           | 5           | 8           |
| High Speed Passenger<br>Craft        | 4                     | 5           | 7           | 2           | 2           |
| Livestock Carrier                    | 85                    | 72          | 71          | 74          | 69          |
| MODU & FPSO                          | 0                     | 2           | 1           | 0           | 0           |
| Offshore Service Vessel              | 17                    | 33          | 25          | 16          | 18          |
| Oil Tanker                           | 181                   | 186         | 178         | 201         | 208         |
| Passenger Ship                       | 25                    | 28          | 38          | 30          | 27          |
| Refrigerated Cargo<br>Carrier        | 18                    | 27          | 20          | 24          | 20          |
| Ro-Ro Cargo Ship                     | 49                    | 45          | 20          | 14          | 17          |
| Ro-Ro Passenger Ship                 | 2                     | 0           | 1           | 0           | 1           |
| Special Purpose Vessel               | 7                     | 11          | 4           | 7           | 15          |
| Tankship -<br>Non Specified          | 9                     | 11          | 12          | 5           | 3           |
| Tugboat                              | 7                     | 12          | 12          | 8           | 5           |
| Vehicle Carrier                      | 119                   | 131         | 117         | 125         | 113         |
| Wood Chip/Pulp Carrier               | 48                    | 50          | 56          | 68          | 58          |
| Other Types                          | 22                    | 29          | 14          | 12          | 15          |
| <b>TOTAL</b>                         | <b>3131</b>           | <b>2946</b> | <b>2753</b> | <b>2926</b> | <b>2913</b> |

**Table 4 - Total number of detentions by ship type**

| Ship Type                            | Number of  |             | Detention<br>percentage |
|--------------------------------------|------------|-------------|-------------------------|
|                                      | Detentions | Inspections |                         |
| Bulk Carrier                         | 69         | 1757        | 3.9                     |
| Chemical Tanker                      | 6          | 65          | 9.2                     |
| Combination Carrier                  | 0          | 22          | –                       |
| Container Ship                       | 17         | 236         | 7.2                     |
| Gas Carrier                          | 1          | 58          | 1.8                     |
| General Cargo/<br>Multi-purpose Ship | 16         | 196         | 8.2                     |
| Heavy Load Carrier                   | 1          | 8           | –                       |
| High Speed Passenger<br>Craft        | 0          | 2           | –                       |
| Livestock Carrier                    | 5          | 69          | –                       |
| Offshore Service Vessel              | 0          | 18          | –                       |
| Oil Tankship                         | 7          | 208         | 3.4                     |
| Passenger Ship                       | 1          | 27          | 3.7                     |
| Refrigerated Cargo<br>Carrier        | 0          | 20          | –                       |
| Ro-Ro Cargo Ship                     | 0          | 17          | –                       |
| Ro-Ro Passenger Ship                 | 0          | 1           | –                       |
| Special Purpose Ship                 | 1          | 15          | 6.6                     |
| Tankship (Non Specified)             | 0          | 3           | –                       |
| Tugboat                              | 0          | 5           | –                       |
| Vehicle Carrier                      | 1          | 113         | 0.8                     |
| Wood Chip Carrier                    | 2          | 58          | 3.5                     |
| Other Type                           | 0          | 15          | –                       |
| <b>Total</b>                         | <b>127</b> | <b>2913</b> | <b>4.36</b>             |

Note: No percentage shown when number of inspections was less than ten.

**Table 5 - Total number of detentions by flag**

| Flag                        | Number of  |             | Detention percentage |
|-----------------------------|------------|-------------|----------------------|
|                             | Detentions | Inspections |                      |
| Antigua & Barbuda           | 2          | 21          | 9.5                  |
| Bahamas                     | 2          | 138         | 1.5                  |
| Belize                      | 1          | 7           | –                    |
| Bermuda                     | 1          | 34          | 2.9                  |
| Cayman Islands              | 1          | 10          | 10                   |
| Cyprus                      | 12         | 129         | 9.3                  |
| Denmark                     | 2          | 47          | 4.3                  |
| Egypt                       | 1          | 12          | 8.3                  |
| France                      | 1          | 17          | 5.9                  |
| Germany                     | 4          | 19          | 21.1                 |
| Greece                      | 1          | 109         | 0.9                  |
| Hong Kong, China            | 5          | 159         | 3.1                  |
| India                       | 3          | 35          | 8.6                  |
| Indonesia                   | 1          | 13          | 7.7                  |
| Iran                        | 3          | 31          | 9.7                  |
| Italy                       | 3          | 13          | 23.1                 |
| Korea (South)               | 3          | 47          | 6.4                  |
| Kuwait                      | 1          | 9           | –                    |
| Liberia                     | 9          | 231         | 3.9                  |
| Malaysia                    | 4          | 53          | 7.6                  |
| Malta                       | 6          | 73          | 8.2                  |
| Marshall Islands            | 1          | 28          | 3.6                  |
| Myanmar                     | 1          | 8           | –                    |
| Netherlands                 | 1          | 41          | 2.4                  |
| Norway                      | 1          | 72          | 1.4                  |
| Panama                      | 39         | 918         | 4.3                  |
| Papua New Guinea            | 1          | 18          | 5.5                  |
| Philippines                 | 1          | 94          | 1.1                  |
| St Vincent & the Grenadines | 2          | 18          | 11.1                 |
| Singapore                   | 6          | 129         | 4.7                  |
| Taiwan, China               | 3          | 48          | 6.3                  |
| Tonga                       | 1          | 4           | –                    |
| Turkey                      | 3          | 32          | 9.4                  |
| United Kingdom              | 1          | 27          | 3.7                  |
| <b>TOTAL</b>                | <b>127</b> | <b>2913</b> |                      |

Note: No percentage shown when number of inspections was less than ten.

**Table 6 - Total number of detentions by classification society**

| Classification Society                                 | Number of   |             | Detention percentage |
|--|-------------|-------------|----------------------|
|  | Detentions* | Inspections |                      |
| American Bureau of Shipping (AB)                       | 10          | 304         | 3.3                  |
| Biro Klasifikasi Indonesia (BKI)                       | 0           | 4           | –                    |
| Bureau Vertias (BV)                                    | 13          | 195         | 6.7                  |
| China Classification Society (CCS)                     | 2           | 91          | 2.2                  |
| China Corporation Register of Shipping (CR, Taiwan)    | 3           | 51          | 5.9                  |
| Croatian Register of Shipping (CRS)                    | 0           | 7           | –                    |
| Det Norske Veritas (DNV)                               | 8           | 314         | 2.6                  |
| Germanischer Lloyd (GL)                                | 12          | 158         | 7.6                  |
| Indian Register of Shipping (IRS)                      | 0           | 26          | –                    |
| Korean Register of Shipping (KR)                       | 4           | 130         | 3.1                  |
| Lloyd's Register of Shipping (LR)                      | 22          | 470         | 4.7                  |
| Nippon Kaiji Kyokai (NK)                               | 37          | 1091        | 3.4                  |
| Polski Rejestr Statkow (PRS)                           | 0           | 3           | –                    |
| Registro Italiano Navale (RINA)                        | 5           | 38          | 13.2                 |
| Russian Maritime Register of Shipping (RS)             | 0           | 25          | –                    |
| Honduras International Surveying and Inspection Bureau | 1           | 1           | –                    |
| Others/not classed                                     | 0           | 5           | –                    |
| Detentions not related to class                        | 10          | –           | –                    |
| <b>Total</b>   | <b>127</b>  | <b>2913</b> |                      |

\* Includes only ships which were detained because of deficiencies to items which were related to certificates issued by the classification society.

Note: No percentage shown when number of inspections was less than ten.

**Table 7 - Total & percentage of deficiency categories**

| Deficiency Categories                      | Number of occurrences |              |              |             |             | Percentage of Total |       |       |       |       |
|--|-----------------------|--------------|--------------|-------------|-------------|---------------------|-------|-------|-------|-------|
|  | 1997                  | 1998         | 1999         | 2000        | 2001        | 1997                | 1998  | 1999  | 2000  | 2001  |
| Life-saving Appliances                     | 3089                  | 2423         | 2030         | 1641        | 1375        | 23.17               | 19.29 | 19.01 | 17.08 | 15.59 |
| Fire Fighting Appliances                   | 2389                  | 2491         | 1810         | 1572        | 1337        | 17.92               | 19.84 | 16.95 | 16.36 | 15.16 |
| Safety in General <sup>1</sup>             | 1838                  | 1813         | 1373         | 1320        | -           | 13.78               | 14.44 | 12.85 | 13.74 |       |
| Navigation Equipment*                      | 884                   | 931          | 796          | 937         | 934         | 6.63                | 7.41  | 7.45  | 9.75  | 10.59 |
| Load Line items                            | 1424                  | 1327         | 997          | 918         | 770         | 10.68               | 10.57 | 9.33  | 9.55  | 8.73  |
| Radio                                      | 461                   | 564          | 955          | 849         | 1206        | 3.46                | 4.49  | 8.94  | 8.84  | 13.68 |
| Propulsion & Auxiliary Machinery           | 605                   | 583          | 464          | 343         | 304         | 4.54                | 4.64  | 4.34  | 3.57  | 3.45  |
| Marpol Annex I (Oil)                       | 340                   | 315          | 308          | 333         | 277         | 2.55                | 2.51  | 2.88  | 3.47  | 3.14  |
| ISM Related Deficiencies*                  | -                     | 242          | 214          | 277         | 175         | -                   | 1.93  | 2.00  | 2.88  | 1.98  |
| SOLAS Operational Deficiencies             | 142                   | 271          | 245          | 275         | 478         | 1.06                | 2.16  | 2.29  | 2.86  | 5.42  |
| Crew & Accommodation                       | 767                   | 381          | 316          | 241         | 348         | 5.75                | 3.03  | 2.96  | 2.51  | 3.95  |
| Food & Catering                            | 413                   | 256          | 208          | 173         | 160         | 3.10                | 2.04  | 1.95  | 1.80  | 1.81  |
| Mooring Arrangements                       | 172                   | 160          | 183          | 153         | 151         | 1.29                | 1.27  | 1.71  | 1.59  | 1.71  |
| Ship's Certificates & Documents            | 221                   | 184          | 188          | 120         | 94          | 1.66                | 1.47  | 1.76  | 1.25  | 1.07  |
| Accident Prevention                        | 129                   | 123          | 151          | 101         | 177         | 0.97                | 0.98  | 1.41  | 1.05  | 2.01  |
| Carriage of Cargo & Dangerous Goods        | 126                   | 137          | 109          | 98          | 97          | 0.94                | 1.09  | 1.02  | 1.02  | 1.10  |
| Marpol Annex V (Garbage)                   | -                     | 18           | 70           | 75          | 83          | -                   | 0.14  | 0.66  | 0.78  | 0.94  |
| Certification & Watchkeeping for Seafarers | 133                   | 130          | 127          | 67          | 69          | 1.00                | 1.04  | 1.19  | 0.70  | 0.78  |
| Working Space                              | 78                    | 83           | 60           | 48          | 34          | 0.58                | 0.66  | 0.56  | 0.50  | 0.39  |
| Marpol Related Operational Deficiencies    | 56                    | 56           | 31           | 31          | 23          | 0.42                | 0.45  | 0.29  | 0.32  | 0.26  |
| Alarm Signals                              | 32                    | 29           | 24           | 18          | 10          | 0.24                | 0.23  | 0.22  | 0.19  | 0.11  |
| Oil, Chemical Tankers & Gas Carriers*      | 16                    | 22           | 7            | 10          | 8           | 0.12                | 0.18  | 0.07  | 0.10  | 0.09  |
| Marpol Annex II (Chemicals)                | 5                     | 3            | 0            | 3           | 2           | 0.04                | 0.02  | 0     | 0.03  | 0.02  |
| Marpol Annex III (Harmful Substances)      | 2                     | 2            | 1            | 1           | 1           | 0.01                | 0.02  | 0.01  | 0.01  | 0.01  |
| Bulk Carriers - Additional Safety Measures | 0                     | 0            | 0            | 0           | 12          | 0.00                | 0.00  | 0.00  | 0.00  | 0.14  |
| Stability, Structure & Related Items       | 0                     | 0            | 0            | 0           | 669         | 0.00                | 0.00  | 0.00  | 0.00  | 7.59  |
| All Other Deficiencies                     | 12                    | 14           | 14           | 5           | 24          | 0.09                | 0.11  | 0.13  | 0.05  | 0.27  |
| <b>TOTAL</b>                               | <b>13334</b>          | <b>12558</b> | <b>10681</b> | <b>9609</b> | <b>8818</b> |                     |       |       |       |       |

<sup>1</sup>Statistics previously allocated to 'Safety in General' are now assigned to Stability, Structure & Related Items, Accident Prevention and Crew & Accommodation under the Tokyo MOU codes now in use.

**Table 8 - Navigation deficiencies**

| Item                          | Number of occurrences | Percentage of total navigation deficiencies |
|-------------------------------|-----------------------|---|
| Radar                         | 45                    | 4.8   |
| Gyro compass                  | 13                    | 1.4   |
| Magnetic compass              | 186                   | 19.9  |
| Lights, shapes, sound signals | 263                   | 28.2  |
| Charts                        | 118                   | 12.6  |
| Nautical publications         | 253                   | 27.1  |
| Miscellaneous                 | 62                    | 6.6   |
| <b>Total</b>                  | <b>934</b>            |   |

**Table 9 - SOLAS operational deficiencies**

| Item                          | Number of occurrences | Percentage of total SOLAS operation deficiencies |
|-------------------------------|-----------------------|--|
| Muster list                   | 95                    | 19.9   |
| Communication                 | 10                    | 2.1  |
| Fire drills                   | 7                     | 1.5  |
| Abandon ship drills           | 172                   | 36.0   |
| Operation of GMDSS equipment* | 100                   | 20.9   |
| Manuals, Instructions etc     | 32                    | 6.7  |
| Miscellaneous                 | 62                    | 13.0   |
| <b>Total</b>                  | <b>478</b>            |  |

\* Indicates names changed to relate to the Tokyo MOU codes used in the Ship Inspection Record booklet.

## ANNEX - LIST OF SHIPS DETAINED IN 2001

- Note: (1) Not all ships were detained as a result of defects in items which were related to certificates issued by the Classification Society.  
 (2) Time that the vessel was delayed beyond its scheduled sailing time.  
 (3) Ship detained on more than one occasion.

| Ship Name                           | IMO Number | Flag                | Classification Society <sup>1</sup>    | Delay <sup>3</sup> (hours) |
|-------------------------------------|------------|---------------------|--|----------------------------|
| <i>Aditya Gaurav</i>                | 8309256    | India               | Indian Register of Shipping            | 0                          |
| <i>Al Shuwaikh</i>                  | 8506361    | Kuwait              | Germanischer Lloyd                     | 0                          |
| <i>Alabama Rainbow</i>              | 8905488    | Panama              | Nippon Kaiji Kyokai                    | 0                          |
| <i>Alwadi Al Gadded</i>             | 8309854    | Egypt               | Lloyds Register of Shipping            | 0                          |
| <i>Andhika Adhidaya</i>             | 8708763    | Singapore           | Nippon Kaiji Kyokai                    | 0                          |
| <i>ANL China</i>                    | 9110951    | Antigua and Barbuda | Germanischer Lloyd                     | 0                          |
| <i>Aristidis D</i>                  | 8110186    | Cyprus              | Lloyds Register of Shipping            | 0                          |
| <i>Assets Energy</i>                | 8025032    | Singapore           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Assets Venture</i>               | 8301230    | Singapore           | American Bureau of Shipping            | 84                         |
| <i>Assets Victory</i>               | 8015532    | Singapore           | Korean Register of Shipping            | 32.5                       |
| <i>Aveiro</i>                       | 8201674    | Cyprus              | Bureau Veritas                         | 0                          |
| <i>Balaji Vintage</i>               | 8025317    | India               | Indian Register of Shipping            | 0                          |
| <i>Bay Bonanza</i>                  | 9146120    | Panama              | Nippon Kaiji Kyokai                    | 0                          |
| <i>Bellatrix</i>                    | 7510858    | Panama              | Registro Italiano Navale               | 0                          |
| <i>Berlin Express</i>               | 7218383    | United Kingdom      | Lloyds Register of Shipping            | 0                          |
| <i>Bow Sky</i>                      | 7384883    | Norway              | Det Norske Veritas                     | 0                          |
| <i>Brazilian Confidence</i>         | 8313221    | Cyprus              | Bureau Veritas                         | 0                          |
| <i>Bunga Saga Empat</i>             | 9050395    | Malaysia            | American Bureau of Shipping            | 12                         |
| <i>Bunga Saga Empat<sup>2</sup></i> | 9050395    | Malaysia            | American Bureau of Shipping            | 0                          |
| <i>Buxcrown</i>                     | 8808599    | Germany             | Germanischer Lloyd                     | 0                          |
| <i>Cape Keppel</i>                  | 8111752    | Cyprus              | Germanischer Lloyd                     | 0                          |
| <i>Cape Oceania</i>                 | 9072032    | Taiwan              | China Corporation Register of Shipping | 0                          |
| <i>Cape Olive</i>                   | 9125451    | Panama              | Nippon Kaiji Kyokai                    | 12                         |
| <i>Channel Alliance</i>             | 9127461    | Philippines         | Lloyds Register of Shipping            | 0                          |
| <i>Chief</i>                        | 8405799    | Malta               | Germanischer Lloyd                     | 0                          |
| <i>China Hope</i>                   | 9041021    | Liberia             | American Bureau of Shipping            | 0                          |
| <i>China Pride</i>                  | 8800119    | Liberia             | American Bureau of Shipping            | 0                          |
| <i>Cinta Trader</i>                 | 8103688    | Panama              | Nippon Kaiji Kyokai                    | 0                          |
| <i>City University</i>              | 8518883    | Cyprus              | Lloyds Register of Shipping            | 32                         |
| <i>Constantinos S</i>               | 8906834    | Malta               | Nippon Kaiji Kyokai                    | 0                          |
| <i>Contship Optimism</i>            | 9128207    | Germany             | Germanischer Lloyd                     | 5                          |
| <i>Direct Condor</i>                | 9155365    | Liberia             | Germanischer Lloyd                     | 0                          |
| <i>Dooyang Glory</i>                | 8418227    | Korea (South)       | Korean Register of Shipping            | 0                          |
| <i>East Fortune</i>                 | 9074016    | Panama              | Nippon Kaiji Kyokai                    | 0                          |
| <i>Eastern Glory</i>                | 8128688    | Korea (South)       | Korean Register of Shipping            | 8                          |
| <i>Eastern Honor</i>                | 8601460    | Korea (South)       | Korean Register of Shipping            | 0                          |
| <i>Europa</i>                       | 9183855    | Bahamas             | Germanischer Lloyd                     | 20                         |
| <i>Ever Apex</i>                    | 9130523    | Panama              | Nippon Kaiji Kyokai                    | 0                          |
| <i>Fairlift</i>                     | 8806905    | Netherlands         | Lloyds Register of Shipping            | 0                          |
| <i>Fajar Kanguru</i>                | 7727695    | Indonesia           | BKI                                    | 3                          |

| Ship Name                      | IMO Number | Flag                             | Classification Society <sup>1</sup>    | Delay <sup>3</sup> (hours) |
|--------------------------------|------------|----------------------------------|--|----------------------------|
| <i>Farid F</i>                 | 7203663    | Saint Vincent and the Grenadines | Registro Italiano Navale               | 0                          |
| <i>Fernie</i>                  | 9105633    | Bermuda                          | Lloyds Register of Shipping            | 0                          |
| <i>Flecha</i>                  | 8022456    | Malta                            | Bureau Veritas                         | 0                          |
| <i>Fortune Light</i>           | 8600167    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Giovanni Bottiglieri</i>    | 9085936    | Italy                            | Registro Italiano Navale               | 3                          |
| <i>Glykofiloussa</i>           | 9083811    | Cyprus                           | Lloyds Register of Shipping            | 0                          |
| <i>Gohshu</i>                  | 8806216    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Golden Gion</i>             | 9125293    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Handy Jade</i>              | 8223335    | Hong Kong, China                 | Nippon Kaiji Kyokai                    | 0                          |
| <i>High Spirit</i>             | 9174610    | Liberia                          | American Bureau of Shipping            | 0                          |
| <i>Hokuetsu Ace</i>            | 8808070    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Imperiale</i>               | 8103286    | Cyprus                           | Bureau Veritas                         | 0                          |
| <i>Ince Express</i>            | 8324397    | Turkey                           | Bureau Veritas                         | 16                         |
| <i>Iolcos Ability</i>          | 8109979    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Iolcos Glory</i>            | 8103535    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Iran Amanat</i>             | 8112990    | Iran                             | Lloyds Register of Shipping            | 75                         |
| <i>Iran Ghodousi</i>           | 8320195    | Iran                             | Lloyds Register of Shipping            | 23.5                       |
| <i>Iran Madani</i>             | 8309622    | Iran                             | Lloyds Register of Shipping            | 17.7                       |
| <i>Johnny</i>                  | 7617424    | Malta                            | Lloyds Register of Shipping            | 0                          |
| <i>Kavo Platanos</i>           | 8400232    | Panama                           | Lloyds Register of Shipping            | 0                          |
| <i>Kiribati Chief</i>          | 8918069    | Liberia                          | Lloyds Register of Shipping            | 0                          |
| <i>La Cordillera</i>           | 9075785    | Panama                           | Bureau Veritas                         | 0                          |
| <i>La Paloma</i>               | 8820262    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Levant</i>                  | 7400027    | Panama                           | Nippon Kaiji Kyokai                    | 0                          |
| <i>Levin</i>                   | 8103755    | Singapore                        | Germanischer Lloyd                     | 12                         |
| <i>Libra</i>                   | 8906535    | Saint Vincent and the Grenadines | Lloyds Register of Shipping            | 0                          |
| <i>M. Faruk</i>                | 8028890    | Turkey                           | Det Norske Veritas                     | 0                          |
| <i>Marine Universal II</i>     | 8123030    | Panama                           | Nippon Kaiji Kyokai                    | 217.5                      |
| <i>Millennium Star</i>         | 8010958    | Cyprus                           | Lloyds Register of Shipping            | 1.5                        |
| <i>Min Noble</i>               | 7929968    | Panama                           | Lloyds Register of Shipping            | 0                          |
| <i>Mirande</i>                 | 9149689    | France                           | Bureau Veritas                         | 101                        |
| <i>MOL Kouri</i>               | 9146651    | Panama                           | Nippon Kaiji Kyokai                    | 28                         |
| <i>MOL Silver Fern</i>         | 9136591    | Panama                           | Nippon Kaiji Kyokai                    | 1.4                        |
| <i>Molunat</i>                 | 6927092    | Singapore                        | Det Norske Veritas                     | 14                         |
| <i>MSC Kiwi</i>                | 8614194    | Germany                          | Germanischer Lloyd                     | 14                         |
| <i>MSC Kiwi<sup>2</sup></i>    | 8614194    | Germany                          | Germanischer Lloyd                     | 0                          |
| <i>MSC Peggy</i>               | 8208672    | Panama                           | American Bureau of Shipping            | 0                          |
| <i>MSC Sonia</i>               | 7111999    | Panama                           | Germanischer Lloyd                     | 80                         |
| <i>MSC Viviana</i>             | 7373418    | Panama                           | Bureau Veritas                         | 22                         |
| <i>MSC Viviana<sup>3</sup></i> | 7373418    | Panama                           | Bureau Veritas                         | 40                         |
| <i>Nego Kim</i>                | 8507535    | Hong Kong, China                 | Nippon Kaiji Kyokai                    | 139.5                      |
| <i>New Success</i>             | 8313269    | Taiwan                           | China Corporation Register of Shipping | 286                        |
| <i>Nikolaos K</i>              | 7926198    | Marshall Islands                 | Nippon Kaiji Kyokai                    | 0                          |



| Ship Name                 | IMO Number | Flag                | Classification Society <sup>1</sup>                    | Delay <sup>3</sup> (hours) |
|---------------------------|------------|---------------------|--|----------------------------|
| <i>Nikos N</i>            | 8307818    | Cyprus              | American Bureau of Shipping                            | 0                          |
| <i>Novikoko</i>           | 8900983    | Malta               | Det Norske Veritas                                     | 1.5                        |
| <i>Oakland Bay</i>        | 9145712    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Oinuossian Sky</i>     | 8419594    | Greece              | Lloyds Register of Shipping                            | 0                          |
| <i>Orient Trust</i>       | 7524122    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Pacific Leader</i>     | 8217544    | Panama              | Nippon Kaiji Kyokai                                    | 4                          |
| <i>Pacific Virgo</i>      | 9198159    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Papuan Coast</i>       | 9158707    | Papua New Guinea    | American Bureau of Shipping                            | 26                         |
| <i>Pearl of Muscat</i>    | 8010893    | Panama              | China Classification Society                           | 0                          |
| <i>Pernas Amang</i>       | 8316596    | Malaysia            | Det Norske Veritas                                     | 13                         |
| <i>Pina Prima</i>         | 8304256    | Italy               | Registro Italiano Navale                               | 0                          |
| <i>Prabhu Daya</i>        | 8022418    | India               | Lloyds Register of Shipping                            | 0                          |
| <i>Pretty Zhe Jiang</i>   | 8024533    | Panama              | China Classification Society                           | 81                         |
| <i>Princess Vanya</i>     | 8801008    | Cyprus              | Nippon Kaiji Kyokai                                    | 58                         |
| <i>Rainbow Spring</i>     | 9159804    | Hong Kong, China    | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Rangitane</i>          | 8405933    | Antigua and Barbuda | Germanischer Lloyd                                     | 0                          |
| <i>Rialto</i>             | 9109483    | Liberia             | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Rita D'Amato</i>       | 8217374    | Italy               | Registro Italiano Navale                               | 2                          |
| <i>Rixta Oldendorff</i>   | 8120698    | Liberia             | Lloyds Register of Shipping                            | 0                          |
| <i>Rose</i>               | 7917927    | Cyprus              | American Bureau of Shipping                            | 10                         |
| <i>Rubin Ace</i>          | 9137959    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>SD Progress</i>        | 8806034    | Panama              | Lloyds Register of Shipping                            | 0                          |
| <i>Sea Master</i>         | 8416176    | Burma (Myanmar)     | Germanischer Lloyd                                     | 0                          |
| <i>Serife</i>             | 8307569    | Turkey              | Det Norske Veritas                                     | 0                          |
| <i>Shearwater</i>         | 8508709    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Shibumi</i>            | 8008785    | Malta               | Bureau Veritas   | 0                          |
| <i>Silky Ocean</i>        | 9118446    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Silver Bin</i>         | 8827454    | Liberia             | Bureau Veritas   | 0                          |
| <i>Silver Bin3</i>        | 8827454    | Liberia             | Bureau Veritas   | 0                          |
| <i>South Fortune</i>      | 9082726    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Southern Knight</i>    | 8403727    | Panama              | Nippon Kaiji Kyokai                                    | 111                        |
| <i>St Cloud</i>           | 8201351    | Hong Kong, China    | Lloyds Register of Shipping                            | 0                          |
| <i>Star Europe</i>        | 8417649    | Bahamas             | Bureau Veritas   | 0                          |
| <i>Steven C</i>           | 8912314    | Cayman Islands      | American Bureau of Shipping                            | 0                          |
| <i>Stolt Devon</i>        | 8417900    | Panama              | Lloyds Register of Shipping                            | 0                          |
| <i>Sun Emerald</i>        | 9031739    | Malaysia            | Nippon Kaiji Kyokai                                    | 5.25                       |
| <i>Svendborg Guardian</i> | 8519198    | Denmark             | Lloyds Register of Shipping                            | 0                          |
| <i>Taisei Maru</i>        | 8604383    | Panama              | Nippon Kaiji Kyokai                                    | 0                          |
| <i>Tauranga Chief</i>     | 8414776    | Cyprus              | Det Norske Veritas                                     | 0                          |
| <i>Tavake Oma</i>         | 8331962    | Tonga               | Registro Italiano Navale                               | 0                          |
| <i>Thor Kirsten</i>       | 8702422    | Denmark             | Lloyds Register of Shipping                            | 20                         |
| <i>Triple Glory</i>       | 8114493    | Belize              | Honduras International Surveying and Inspection Bureau | 78.33                      |
| <i>United Purpose</i>     | 9100097    | Hong Kong, China    | Det Norske Veritas                                     | 0                          |
| <i>Yu Tsao II</i>         | 8617122    | Taiwan              | China Corporation Register of Shipping                 | 0                          |