



Australian Government

Australian Maritime Safety Authority

PORT STATE CONTROL 2014 Report Australia



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2014

Port State Control Report



Australia

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Purpose of this report

As one of the largest mixed market economies, Australia's national livelihood remains critically focussed on ensuring that maritime trade to and from Australia remains safe, efficient and that shipping transport operations comply with the latest international conventions. Australia relies on sea transport for 99 per cent of its exports.

In fulfilling this primary goal, this report seeks to summarise the port State control (PSC) activities of the Australian Maritime Safety Authority (AMSA) and report on the performance of commercial shipping companies, flag States and Classification Societies for the 2014 calendar year.

As a statutory authority, AMSA's objectives include:

- promoting maritime safety
- protecting the marine environment from:
 - pollution from ships
 - other environmental damage caused by shipping
- providing a national search and rescue service to the maritime and aviation sectors.

To meet government and community expectations, AMSA is empowered to perform an enforcement function for maritime trade through the implementation of rigorous flag State and port State control regimes. In doing so, AMSA works closely in cooperation with the International Maritime Organization (IMO) and PSC partner nations across the Indian Ocean and Asia-Pacific area, sharing PSC information and actively participating in international policy development. Collectively, these efforts are aimed at ensuring that AMSA is a transparent, trusted and consistent member of the maritime community.

Under its flag State control (FSC) program, AMSA holds responsibility for the operational safety standards of Australian-registered trading ships wherever they may be in the world.

As the outcomes of PSC activities are used by a diverse customer base on a regular basis, AMSA supplies current information via its website, indicating monthly ship detentions, ongoing PSC activities, current shipping trends and emerging issues. Importantly, AMSA identifies and promulgates government regulation and important marine observations through Marine Orders and Marine Notices respectively.

Year in review

Introduction

2014 marked the introduction of a significant step-change in Australia's response to ships and operators who perform poorly on a consistent basis. In November and December 2014 AMSA used the directions power provided in section 246 of the *Navigation Act 2012* to ban 2 ships from entering or using Australian ports for a period of 3 months.

In exercising this power it is important to note that AMSA only employs this mechanism where normal PSC intervention has not been effective in achieving a lasting change in behaviour. It is only used where a systemic failure has been identified. The essential intent of the process is to improve performance rather than simply remove problem vessels from Australian ports¹.

2014 summary of port State control activity

- During the calendar year there were:
 - 26,936 ship arrivals by 5674 foreign-flagged ships
 - 3742 PSC inspections
 - 269 ship detentions
- bulk carriers accounted for 49 per cent of ship arrivals and 57 per cent of PSC inspections
- PSC inspections were carried out in 54 Australian ports
- average gross tonnage per visit was 46,670 tonnes².

1. More detail is provided on the Ship Safety section of the AMSA website (amsa.gov.au)

2. The average gross tonnage per visit in 2013 was only very slightly lower at 44,462 GT

10-year summary of inspection, detentions and deficiency rate

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total inspections	3021	3072	3080	2963	2795	2994	3127	3002	3179	3342	3742
Total detentions	173	154	138	159	225	248	222	275	210	233	269
Detentions %	5.4	5.0	4.5	5.4	8.1	8.3	7.1	9.2	6.6	7.0	7.2
Deficiencies per detentions	2.3	2.6	2.9	2.5	3.3	3.0	2.4	2.8	2.4	2.4	2.9

Snapshot comparison to previous year

		2013	2014	When compared to 2013
Arrivals	Total arrivals	25,697	26,936	↑4.8%
	Individual ships	5447	5674	↑4.2%
	Ship eligible for PSC	5216	5457	↑4.6%
PSC inspections	Total PSC inspections	3342	3742	+ 400 ships (↑12%)
	Individual ships	2950	3267	+ 317 ships (↑10.7%)
	Inspection rate	57%	60%	↑3.0%
Deficiencies	Total deficiencies	8183	10,892	↑33.1%
	Detainable deficiencies	316	385	↑21.8%
	Rate per inspection	2.4	2.9	↑20.8%
Detentions	Total detentions	233	269	↑15.5%
	% of total detentions	7.0%	7.2%	↑0.2%

Throughout 2014, AMSA continued to evolve training and management processes increasing the number of surveyors to cope with higher shipping volumes. As a result, the number of inspections conducted during 2014 rose to a new high of 3742. There has also been a commensurate increase in the total number of identified deficiencies.

A comparison between the 12 per cent increase in PSC inspections and a 33.1 per cent increase in the number of deficiencies suggests the growth in deficiencies had been disproportionate. However, there are factors that explain these trends (indicated below).

Top 5 initial PSC inspections by flag State 2014

<p>There was a total of 3742 foreign-flag vessels inspected in 2014.</p> <p>The top 5 flags accounted for 66% of all inspections while the top 12 accounted for 85% of the total.</p>	Flag State (Number of inspections)
	Panama (1002) – 26.8%
	Hong Kong (431) – 11.5%
	Singapore (376) – 10.0%
	Liberia (350) – 9.4%
	Marshall Islands (303) – 8.1%

Top 5 detention rate by flag State 2014

<p>There was a total of 269 foreign-flag vessels detained in 2014.</p> <p>The average detention rate for all vessels was 7.2%.</p>	Flag State (Number of detentions)
	Indonesia (10) – 66.7%
	Antigua and Barbuda (15) – 20.3%
	Greece (11) – 14.1%
	Malaysia (2) – 12.5%
	Cyprus (10) – 11.6%

Note: This table only covers vessel types with 10 or more inspections

Trends for 2014

By drawing comparisons based on 10 years of Australian PSC data the outcome may be considered, at first view, to be disappointing with the apparent stabilisation of annual PSC deficiency and detention rates over the last 5 years. While there have been modest improvements experienced across a number of areas, the overall picture indicates that the international community's PSC/FSC efforts are not delivering lasting results. The principal causes of detention remain consistently related to International Safety Management (ISM), fire safety, lifesaving appliances and pollution prevention. It seems difficult to reconcile how well established requirements for fire safety, lifesaving appliances and pollution prevention continue to be such significant issues.

Top 5 detainable deficiencies 2012-2014

2012	2013	2014
ISM - 33.9%	ISM - 27.5%	ISM - 31.2%
Fire safety - 17.8%	Fire safety - 19.6%	Fire safety - 14.0%
Lifesaving - 11.9%	Lifesaving - 14.5%	Lifesaving - 11.4%
Pollution prevention - 6.5%	Pollution prevention - 9.2%	Pollution prevention - 10.4%
Emergency systems - 6.2%	Water/weather-tight - 9.2%	Emergency systems - 8.3%

Part of the cause for this situation is the increasing focus by Australia on human factors, including operational control, ISM and the *Maritime Labour Convention, 2006* (MLC, 2006).

As indicated in the discussion on MLC, 2006 later in this report, the marginal increase in the deficiency and detention rates can be attributed to MLC, 2006 to a large degree. The fact that there was no significant spike in detentions or deficiency rates is encouraging given 2014 was the first full year that the MLC, 2006 was in force.

Summary of shipping industry activity 2014

The changes to the shipping industry's safety regulatory framework introduced in 2013 by the *Navigation Act 2012* and the adoption of the *Maritime Labour Convention, 2006* had their first full year in effect in 2014. These changes resulted in new areas of safety oversight, port State control inspections identified additional deficiency types, which have had an impact on the usual annual performance measures used as a guide to the effectiveness of this inspection program for ships and their cargoes.

Shipping activity continued to grow fairly strongly in 2014, in spite of falling prices for the main commodities of iron ore and coal, which account for the major share of capacity in Australian trade. The following trends in shipping activity were identified:

- In 2014, there were 26,936 port calls by foreign-flagged ships, an increase of 4.8 per cent, (stronger than the 2.3 per cent growth in port arrivals in 2013). The number of individual ships making these calls also increased by 4.2 per cent, to 5674 in 2014.
- Consistent with the trends in recent years, 29.5 per cent of these ships made only a single port call in Australia in the year, and 2168 ships (38 per cent) which visited in 2014 did not visit an Australian port in 2013, continuing the trend of high rates of fleet turnover and replacement observed in recent years.
- These replacement ships were, at 8.3 years age on average, 2 years younger than the ships which did not return in 2014, which would normally indicate an overall improvement in fleet safety (as ship age is a major indicator of the probability of a ship being detained at PSC inspection). However this improvement has not been achieved, as for the first time in several years the average age of the visiting foreign-flagged fleet increased during 2014, which was subsequently reflected in a small decline in expected ship safety performance and regulatory compliance.
- The overall foreign fleet visiting Australia in 2014 had an average age of 8.4 years. This is an increase from 2012 (8.2 years) and 2013 (8.1 years).
- The foreign fleet that called into Australian ports in 2014 represented larger ships overall. The average deadweight carrying capacity per port arrival in 2014 was 72,826 tonnes, an increase of 6.3 per cent over the previous year.
- Bulk carriers accounted for 49 per cent of foreign ship port visits and 66 per cent of the individual ships. There was little change in activity by container ships, while general cargo ships and oil tankers experienced declines of 11 per cent and 26 per cent respectively in port visits. Of the other main ship types, chemical tankers and gas carriers had growth rates of 20 per cent and 11 per cent respectively.
- In 2014 the risk profile of foreign-flagged ships and their port visits changed as a result of fleet turnover, such that a higher proportion of individual ships and a higher proportion of port visits by foreign ships were ranked in the top 2 risk groups of priority 1 and priority 2 for inspection focus. This meant that the improvements in ship risk profile experienced in 2013 were reversed in 2014.

Table 1 – Individual ships

Priority*	2012		2013		2014	
	Number of ships	Fleet share	Number of ships	Fleet share	Number of ships	Fleet share
P1	339	6.6%	457	8.4%	500	8.8%
P2	383	7.5%	410	7.5%	441	7.8%
P3	1108	21.7%	1193	21.9%	1181	20.8%
P4	3272	64.1%	3387	62.2%	3552	62.6%
Total	5102		5447		5674	

Table 2 – Port visits

Priority*	2012		2013		2014	
	Number of ships	Fleet share	Number of ships	Fleet share	Number of ships	Fleet share
P1	3644	14.5%	3660	14.2%	4756	17.7%
P2	2704	10.8%	2750	10.7%	3128	11.6%
P3	7025	28.0%	6476	25.2%	6846	25.4%
P4	11,742	46.8%	12,811	49.8%	12,206	45.3%
Total	25,115		25,697		26,936	

*See page 25 for more details or priority groups



2014 Maritime Labour Convention results

The Maritime Labour Convention, 2006 (MLC, 2006) is an international convention developed by the International Labour Organization. It consolidates a number of existing labour conventions and introduces modern standards relating to the living and working conditions of the world’s 1.4 million seafarers. Australia is a signatory to the MLC, 2006 which entered in to force internationally on 20 August 2013. The legislative mechanisms required to give effect to MLC, 2006 were adopted in Australia on 1 July 2013.

AMSA applies the MLC, 2006 to both Australian-flagged and foreign-flagged vessels visiting our ports. During 2014, AMSA surveyors observed a general improvement in seafarers’ knowledge and application of the MLC, 2006. Allied with this has been a noticeable increase in the number of ‘Onshore’ complaints being registered, wherein seafarers can raise concerns external to shipboard mechanisms. These ‘Onshore’ complaints are forwarded to AMSA for consideration and where considered justified, are subject to an investigation and more detailed inspection by AMSA inspectors.

In 2014, AMSA received 114 MLC, 2006 complaints pertaining to breaches in the living and working conditions on board vessels. These complaints were derived from a number of sources, including the seafarers themselves, other government agencies, seafarer welfare groups, agents, pilots and members of the general public with a vested interest in the welfare of seafarers. Following investigation of the complaints received, deficiencies were issued against 56 vessels and 8 vessels were detained for MLC, 2006-related breaches. During this time there were no flag State detentions.

A percentage breakdown of the complaints received per regulation for 2014, are detailed in Table 3.

Table 3 – Percentage breakdown of complaints received per regulation in 2014

Category of complaints received for 2014	
Wages	25%
Seafarers Employment Agreement	10%
Hours of work and hours of rest	6%
Food and catering	20%
Accommodation and recreational facilities	4%
Health and safety protection and accident prevention	5%
Repatriation	7%
Other	23%

The ratification of MLC, 2006 and the implementation of legislation such as the *Navigation Act 2012*, and subordinate legislation *Marine Order 11 (Living and working conditions on vessels) 2014*, has given AMSA the authority to ensure the working and living conditions of seafarers are being maintained in accordance with the convention requirements.

MLC, 2006 compliance is verified during PSC inspections and the results for 2014 are shown in Table 4. This table identifies the number of MLC, 2006-related deficiencies, detainable deficiencies and detentions.

Table 4 – 2014 MLC results

	Total deficiencies	MLC deficiencies	Total detainable deficiencies	MLC detainable deficiencies	Total detentions	MLC detentions
Bulk carrier	6264	877	202	9	146	6
Chemical tanker	278	58	6	1	2	1
Container ship	1017	184	41	3	29	3
Gas carrier	61	12	1	0	1	0
General cargo/ multipurpose ship	968	144	46	2	34	2
Livestock carrier	331	49	11	0	7	0
Oil tanker	439	138	16	6	10	3
Vehicle carrier	322	48	11	1	9	1
Other ship types	1212	142	55	1	31	1
Totals	10,892	1652	385	23	269	17

The introduction of the MLC, 2006 has resulted in an increased number of port State control deficiencies and detentions in general and in 2014 AMSA identified 1652 deficiencies related to MLC, 2006 issues. This represented 15.1 per cent of the total of 10,892 deficiencies issued and equated to 0.4 deficiencies per inspection overall.

Of the 385 detainable deficiencies issued in 2014, 23 were related to MLC, 2006 requirements, accounting for 6 per cent of the total detainable deficiencies and making the category the sixth most prevalent cause of detention in 2014. These port State control activities are indicative of AMSA's commitment to improving the working and living environment of seafarers and ensuring compliance with MLC, 2006. An MLC, 2006 inspection snapshot for 2014 is provided in the following table.

MLC, 2006 inspection snapshot for 2014

AMSA inspected 3742 ships and issued 10,892 deficiencies in 2014. 385 of these deficiencies were detainable	Flag State (Number of detentions)
	1652 deficiencies issued
	MLC, 2006 deficiencies 15.1% of the total
	0.4 deficiencies per inspection related to MLC, 2006
	23 detainable deficiencies
	6% of detainable deficiencies

Analysis of 2014 results

Arrivals

The growth in traffic and in ship sizes was distributed unevenly across the 73 ports visited by foreign ships in 2014.

Ship arrivals in Australian ports for 2014

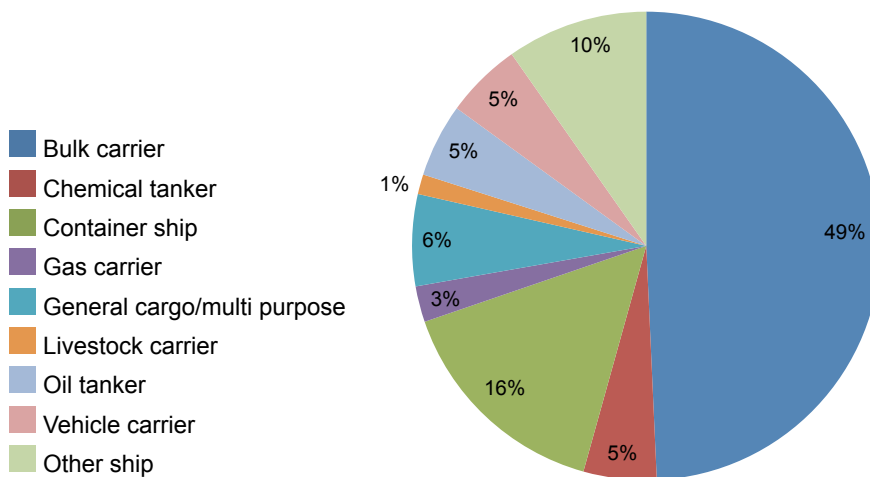
A total of 26936 ships arrived at Australian ports during 2014	Top 5 ports
	1. Port Hedland - 2662 (9.8%)
	2. Brisbane - 2522 (9.3%)
	3. Newcastle - 2190 (8.1%)
	4. Melbourne - 1965 (7.3%)
	5. Dampier - 1840 (6.8%)

Arrivals at Port Hedland grew by 26 per cent in the year, which makes that port the busiest in Australia, overtaking the general cargo ports of Brisbane and Melbourne. Activity levels were generally static or declined at the major capital city ports of Brisbane (-0.7 per cent), Melbourne (-9.5 per cent), Port Adelaide (-2.9 per cent), and Sydney (-0.2 per cent), although visits to Fremantle and Kwinana grew by around 4 per cent.

Table 5 – Ship arrivals in 2014 compared to 2013

Ship type	2013	2014	Change
Bulk carrier	11958	13275	11.01%
Chemical tanker	1127	1358	20.50%
Container ship	4133	4155	0.53%
Gas carrier	602	668	10.96%
General cargo/Multi-purpose	1919	1705	-11.15%
Livestock carrier	265	369	39.25%
Oil tanker	1856	1365	-26.45%
Vehicle carrier	1569	1417	-9.69%
Other	2268	2624	15.70%
Totals arrivals	25,697	26,936	4.82%

Figure 1 – 2014 port arrivals by ship type



The continued predominance of PSC inspection results from Brisbane (+11 per cent), Newcastle (+11 per cent), Hay Point (+9 per cent), and Kwinana (+9 per cent) highlights the continued emphasis on the bulk export trade, with Queensland and Western Australia again featuring as the 2 busiest export hubs. The volume of shipping traffic arriving in southern Australian ports indicated the marked differential between exports and imports to the Australian economy, while highlighting the differing nature of cargoes and shipping density - i.e. southern ports tending toward general cargo/container traffic and as the second/third port of call after landfall.

State by state totals continue to emphasise the importance of trade from Queensland and Western Australia, with New South Wales following as a competitive third. Data indicates that Victoria, South Australia, Tasmania and the Northern Territory may potentially be described as representing a 'Coastal trading block' with regard to port usage, reflecting the dominance of the trans-shipment of manufactured goods and exports from and between the southern states.

In 2014, there was a continued growth in the number of livestock ships and gas carriers calling into Australia.



Inspections

In 2014, AMSA surveyors carried out 3742 initial PSC inspections in conformance with international conventions, associated codes, resolutions and Australian legislation. As a result of these initial inspections, AMSA surveyors carried out 1904 follow up inspections.

PSC Inspections by ship type

A total of 3742 port State control (PSC) inspections conducted in 2014	2014 Top 5
	1. Bulk carrier - 2122 (56.7%) 2. Container ships - 342 (9.1%) 3. Oil tankers - 244 (6.5%) 4. General cargo ships - 232 (6.2%) 5. Vehicle carriers - 184 (4.9%)

It proved to be a busy year for AMSA's Surveyors, with a 12 per cent increase in the overall number of inspections in comparison to 2013. Newcastle, Brisbane, Hay Point, Kwinana, and Port Hedland have remained the five busiest ports for PSC inspection.

Of the 54 ports at which inspections were conducted, 14 ports accounted for 84 per cent of the 3742 inspections undertaken in 2014. This is reflected in Table 6.

Table 6 – PSC inspections by location (top 14 Ports)

	2010	2011	2012	2013	2014	% of total in 2014
Newcastle, NSW	293	360	392	333	355	9.5%
Brisbane, QLD	244	209	268	201	350	9.4%
Hay Point, QLD	339	198	230	237	274	7.3%
Kwinana, WA	179	160	206	248	272	7.3%
Port Hedland, WA	189	228	195	150	265	7.1%
Dampier, WA	249	270	247	238	264	7.0%
Gladstone, QLD	242	222	133	127	230	6.1%
Melbourne, VIC	146	193	185	176	190	5.1%
Port Botany, NSW	179	193	186	185	187	5.0%
Port Kembla, NSW	115	108	175	195	171	4.6%
Fremantle, WA	137	119	148	166	165	4.4%
Darwin, NT	133	61	126	143	156	4.2%
Townsville, QLD	110	104	133	164	136	3.6%
Geraldton, WA	39	15	34	138	127	3.4%

As a result of shipping activity, the greatest numbers of PSC inspections were undertaken in Western Australian ports in 2014 followed by Queensland and New South Wales. The overall inspection rate of eligible ships was 60 per cent, up from 57 per cent in 2013.

Figure 2 – PSC inspections in 2014 by state/territory

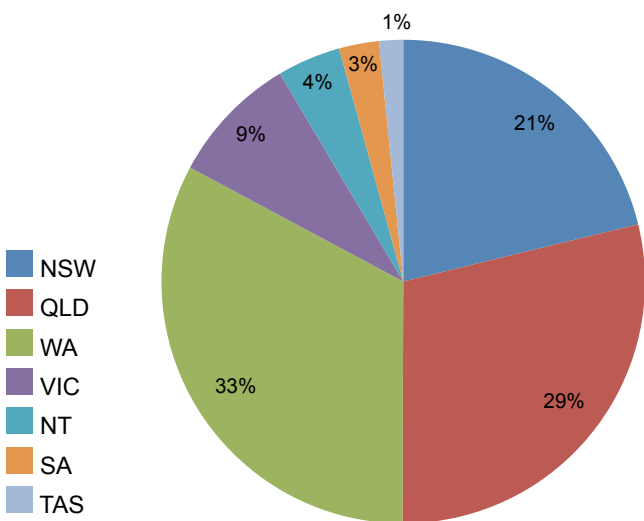


Table 7 provides a 5-year breakdown of the number of vessels inspected against each flag State. The table does not identify any significant change in inspections by flag State over the last 5 years. The flag State with the largest number of ships inspected by AMSA was Panama with 1002 ships inspected (i.e. 27 per cent of the total). This is consistent with the result in 2013. Inspections of ships from the flag States of Panama, Hong Kong, Singapore, Liberia and Marshall Islands accounted for 66 per cent of all PSC inspections.



Table 7 – Total ships inspected by flag State

Flag State	2010	2011	2012	2013	2014
Antigua and Barbuda	75	89	84	84	74
Argentina	1	0	0	0	0
Bahamas	106	109	104	122	125
Bangladesh	1	0	0	0	0
Barbados	7	4	2	3	3
Belgium	12	14	8	12	7
Belize	2	2	2	3	2
Bermuda	22	17	16	16	16
Bulgaria	1	0	0	0	0
Cayman Islands	18	22	20	32	21
China	76	60	89	94	103
Cook Islands	7	3	2	5	6
Croatia	8	7	3	6	3
Curacao	2	2	3	2	3
Cyprus	106	87	82	72	86
Denmark	10	9	12	9	22
Dominica	2	4	2	1	1
Egypt	3	5	5	4	3
Estonia	0	0	0	0	2
Fiji	0	1	0	0	0
France	11	5	4	2	3
Germany	21	17	14	10	2
Gibraltar	14	8	16	24	14
Greece	80	64	53	63	78
Hong Kong	298	291	326	372	431
India	23	22	23	18	11
Indonesia	11	8	7	8	15
Ireland	0	1	1	0	0
Isle Of Man	40	38	50	58	70
Italy	50	41	35	28	15
Jamaica	0	0	0	0	1
Japan	34	53	54	56	68
Kiribati	0	0	1	0	0
Korea, Republic of	86	85	68	68	73
Kuwait	4	5	3	3	4
Liberia	270	260	303	313	350
Libya	2	0	0	0	0
Lithuania	1	0	0	0	0
Luxembourg	2	6	3	7	8
Malaysia	16	19	14	10	16
Malta	108	105	127	135	172
Marshall Islands	146	166	186	224	303
Mauritius	0	0	0	0	1
Netherlands	38	39	46	57	42
New Zealand	2	2	1	1	2
Norway	32	28	31	44	44
Pakistan	0	1	2	0	1
Panama	973	882	936	916	1002
Papua New Guinea	11	10	14	14	8
Philippines	43	32	27	33	29
Portugal	2	1	1	3	7
Qatar	0	0	0	1	0
Russian Federation	1	1	1	0	0
Saint Kitts and Nevis	0	0	1	0	0
Saint Vincent and The Grenadines	5	1	0	3	3
Samoa	1	2	2	1	2
Saudi Arabia	0	0	0	1	1
Singapore	197	237	264	287	376
Solomon Islands	0	0	0	1	0
Sri Lanka	0	1	1	1	0
Sweden	10	10	12	8	8
Switzerland	7	6	5	4	11
Taiwan	16	16	20	13	13
Thailand	15	17	9	11	11
Tonga	4	4	1	1	2
Turkey	15	14	7	3	4
Tuvalu	0	0	1	4	0
United Kingdom	42	40	46	51	34
United States of America	1	5	5	2	6
Vanuatu	28	16	17	11	18
Vietnam	8	8	7	7	6
Totals	3127	3002	3179	3342	3742

Figure 3 represents the inspections by flag State for vessels having been subjected to more than 25 inspections during 2014. Flag States that have less than 25 inspections in a year are not considered to be statistically significant.

Figure 3 – Distribution of Inspections by Flag State - 25 or more inspections

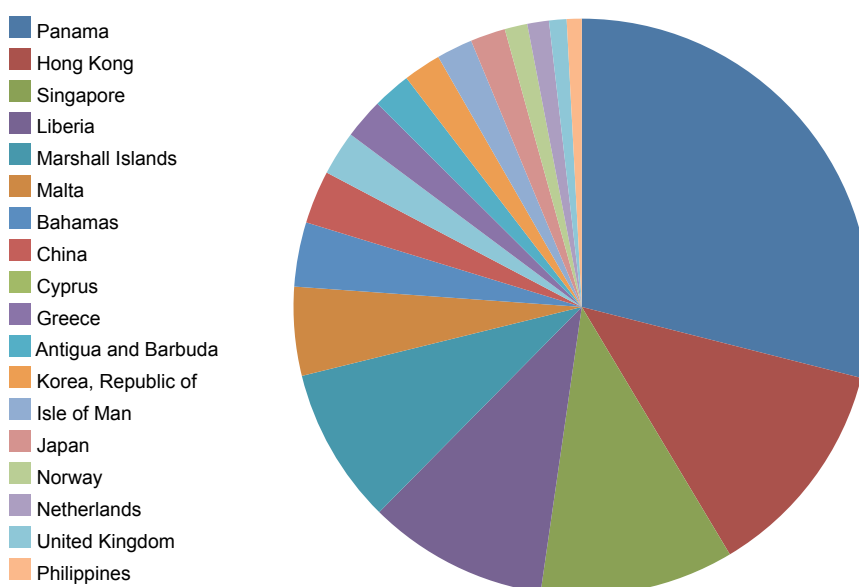


Table 8 shows the number of inspections compared to vessel type, presented over a 5-year period covering 2010 to 2014.

Table 8 – Total ships inspected by type

Ship type	2010	2011	2012	2013	2014
Bulk carrier	1865	1763	1787	1850	2122
Chemical tanker	107	106	126	138	169
Combination carrier	1	1	0	0	3
Container ship	279	304	306	298	342
Gas carrier	44	47	46	53	53
General cargo/multi-purpose ship	237	245	246	262	232
Heavy load carrier	23	23	56	60	55
High speed passenger craft	1	0	0	0	1
Livestock carrier	39	34	29	43	55
MODU or FPSO	6	3	4	0	1
NLS tanker	7	12	17	15	25
Offshore service vessel	19	12	9	17	24
Oil tanker	200	181	211	235	244
Passenger ship	29	31	38	39	42
Refrigerated cargo vessel	2	4	4	4	5
Ro-ro cargo ship	11	12	12	12	6
Ro-ro passenger ship	1	0	1	1	1
Special purpose ship	9	6	7	5	8
Tugboat	29	28	40	57	88
Vehicle carrier	146	121	178	181	184
Wood-chip carrier	57	59	52	52	56
Other types of ship	15	10	10	20	26
Totals	3127	3002	3179	3342	3742

Deficiencies

During 2014, AMSA surveyors recorded a total of 10,892 deficiencies giving a deficiency rate of 2.9 per inspection compared to 2.4 per inspection in 2013.

Top 5 deficiencies per inspection by ship type 2014

<p>A total of 10,892 deficiencies were issued in 2014 with the average deficiencies per inspection being 2.9</p>	<p>Ship type (deficiencies per inspection)</p>
	<p>Livestock carrier (6.0)</p>
	<p>Tugboats (4.4)</p>
	<p>General cargo ships (4.2)</p>
	<p>Passenger ship (3.1)</p>
	<p>Offshore service vessel (3.0)</p>

Note: Only vessel types that had 10 or more inspections are included.

The IMO defines a deficiency as ‘a condition found not to be in compliance with the requirements of the relevant convention’. AMSA surveyors will issue a ship with a deficiency if they determine that either the condition of a ship, its equipment, or performance of its crew is found not to comply with the requirements of relevant international conventions.

For reporting purposes, deficiencies have been categorised into the following groups used to identify key areas of non-compliance: structural/equipment, operational, human factors, International Safety Management (ISM) and MLC, 2006. Table 9 identifies the number of deficiencies by category along with a comparison of the deficiency rate to those of 2013.



Table 9 – Deficiencies by category and ship type

Ship type	Structural/ equipment	Operational	Human factor	ISM	MLC	PSC
Bulk carrier	2657	1196	1224	311	876	2122
Chemical tanker	128	42	39	11	58	169
Combination carrier	1	0	0	0	0	3
Container ship	437	198	140	58	184	342
Gas carrier	24	13	9	3	12	53
General cargo/multi-purpose ship	434	190	150	50	144	232
Heavy load carrier	60	27	24	8	16	55
High speed passenger craft	2	5	0	0	0	1
Livestock carrier	182	60	33	7	49	55
MODU or FPSO	2	1	0	1	1	1
NLS tanker	23	12	8	3	10	25
Offshore service vessel	30	17	16	3	7	24
Oil tanker	185	72	33	11	138	244
Passenger ship	71	24	16	4	16	42
Refrigerated cargo vessel	16	7	5	3	6	5
Ro-ro cargo ship	16	23	2	1	0	6
Ro-ro passenger ship	0	0	0	0	1	1
Special purpose ship	10	12	5	2	2	8
Tugboat	161	145	37	15	30	88
Vehicle carrier	134	55	60	25	48	184
Wood-chip carrier	110	21	15	8	50	56
Other types of ship	35	42	15	5	4	26
Total for 2014	4718	2162	1831	529	1652	3742
2014 Deficiency rates	1.3	0.6	0.5	0.1	0.4	2.9
Total for 2013	3594	1950	1682	480	477	3342
2013 Deficiency Rates	1.1	0.6	0.5	0.1	0.1	2.4

Table 9 indicates that the vast majority of deficiencies were issued to bulk carriers. This is hardly surprising given bulk carriers represent 56.7 per cent of all inspections. In order to assess the performance of vessel types, it is necessary to compare the deficiencies per inspection for each category. This information is provided in Table 10.

Table 10 – Deficiencies by ship category

Ship type	Structural/ equipment	Operational	Human factor	ISM	MLC, 2006	Number of inspections	Number of deficiencies	Deficiencies per inspection
Bulk carrier	1.25	0.56	0.58	0.15	0.41	2122	6264	2.95
Chemical tanker	0.76	0.25	0.23	0.07	0.34	169	278	1.64
Container ship	1.28	0.58	0.41	0.17	0.54	342	1017	2.97
Gas carrier	0.45	0.26	0.17	0.06	0.23	53	61	1.15
General cargo/multi- purpose ship	1.87	0.82	0.64	0.21	0.62	232	968	4.17
Heavy load carrier	1.09	0.49	0.44	0.15	0.29	55	135	2.45
Livestock carrier	3.31	1.09	0.6	0.13	0.89	55	331	6.02
NLS tanker	0.92	0.48	0.32	0.12	0.4	25	56	2.24
Offshore service vessel	1.25	0.71	0.67	0.13	0.29	24	73	3.04
Oil tanker	0.76	0.30	0.14	0.05	0.56	244	439	1.80
Passenger ship	4.44	0.57	0.38	0.1	0.38	42	131	3.12
Tugboat	1.83	1.65	0.42	0.17	0.34	88	288	4.41
Vehicle carrier	0.73	0.30	0.33	0.14	0.46	184	184	1.00
Wood-chip carrier	1.96	0.38	0.27	0.14	0.89	56	56	1.00

Note: Only vessel types with 10 or more inspections are included.

During 2014, there was a 33 per cent increase in the number of deficiencies issued during the year in conjunction with a 12 per cent increase in the number of ship inspections. As a result, the deficiency rate per inspection rose from 2.4 in 2013 to 2.9 in 2014. However, as indicated in Table 11, a large part of this increase can be attributed to the impact of MLC, 2006.

Table 11 – Deficiencies per inspection: 2.9%

Deficiency	2013	2014	Trend
Structure/equipment	1.1	1.3	↑
Operational	0.6	0.6	-
Human factors	0.5	0.5	-
ISM	0.1	0.1	-
MLC	0.1	0.4	↑

Detentions

During 2014, AMSA surveyors detained 269 ships, an average detention rate of 7.2 per cent, compared to 233 ships at 7.0 per cent in 2013.

Top 5 Detention by ship type 2013 and 2014

A total of 269 detentions occurred in 2014 with an average detention rate of 7.2%	2013	2014
	NLS tanker (13.3%)	General cargo ships (14.7%)
	Livestock carrier (11.6%)	Tugboats (13.6%)
	Other types of ship (8.4%)	Livestock carrier (12.7%)
	Container ship (8.4%)	Other types of ship (11.5%)
	Heavy load carrier (8.3%)	Container ship (8.5%)

Note: Only vessel types with 10 or more inspections are included.

The IMO defines a detention as: *‘intervention action taken by the port State when the condition of the ship or its crew does not correspond substantially with the applicable conventions to ensure that the ship will not sail until it can proceed to sea without presenting a danger to the ship or persons on board, or without presenting an unreasonable threat of harm to the marine environment, whether or not such action will affect the scheduled departure of the ship’.*

Table 12 indicates the proportion of detainable deficiencies in different categories over a 3-year rolling period. As indicated in this table, the detainable deficiencies relating to the category of International Safety Management (ISM) decreased while the category of fire safety and lifesaving appliances increased, compared to the previous year.

The relatively high proportion of detainable deficiencies attributable to the ISM category continues to remain a major cause of concern as it indicates that the management of ships is not as effective as desired.



Table 12 – Detainable deficiencies by category

Category	2012		2013		2014	
	No. of deficiencies	Share%	No. of deficiencies	Share%	No. of deficiencies	Share%
ISM	120	33.9	87	27.5	120	31.2
Fire safety	63	17.8	62	19.6	54	14.0
Lifesaving appliances	42	11.9	46	14.5	44	11.4
Pollution prevention	23	6.5	29	9.2	40	10.4
Emergency systems	22	6.2	21	6.6	32	8.3
Water/weather-tight conditions	20	5.6	29	9.2	13	3.4
Safety of navigation	19	5.4	9	2.8	18	4.7
Radio communications	12	3.4	18	5.7	18	4.7
Structural conditions	10	2.8	6	1.9	4	1.0
Certificates and documents*	4	1.1	3	0.9	12	3.1
Cargo operations including equipment	3	0.8	0	0	1	0.3
Propulsion and auxiliary machinery	3	0.8	1	0	2	0.5
Working and living conditions*	1	0.3	0	0	21	5.5
Alarms	0	0	0	0	0	0.0
Dangerous goods	0	0	0	0	0	0.0
International Ship and Port Facility Security Code (ISPS)	0	0	0	0	0	0.0
Other*	12	3.4	5	1.6	6	1.6
Totals	354		316		385	

* Note: The categories 'Certificates and Documentation', 'Other' and 'Working and Living Conditions' may include detainable deficiencies related to MLC, 2006 (See the MLC Section (page 8) for the breakdown of ship types).

As would be expected, bulk carriers represented the largest percentage of Australian detentions given the relative number of these ships actually inspected. However, as indicated in Table 13 the figures for 2014 show an improvement in the performance of bulk carriers with the detention rate being below the overall average. Conversely, general cargo/multi-purpose ships have demonstrated a slip in performance, suggesting fleets that carry general cargo suffer from an increased exposure due to the relative age differentials observed between bulk carriers and container ships. Likewise, the performance of passenger ships has also slipped relative to 2013, highlighting increased PSC exposure with the rise in number of passenger ships calling into Australia.

Table 13 – Detentions by ship type

Ship type	2014			2013 Detention rate
	Inspections	Detentions	Detention rate	
Bulk carrier	2122	146	6.9%	7.4%
Chemical tanker	169	2	1.2%	2.9%
Combination carrier	3	0	0.0%	-
Container ship	342	29	8.5%	8.4%
Gas carrier	53	1	1.9%	7.5%
General cargo/multi-purpose ship	232	34	14.7%	7.4%
Heavy load carrier	55	4	7.3%	8.3%
High speed passenger craft	1	0	0.0%	-
Livestock carrier	55	7	12.7%	11.6%
MODU or FPSO	1	1	100.0%	-
NLS tanker	25	1	4.0%	13.3%
Offshore service vessel	24	2	8.3%	0.0%
Oil tanker	244	10	4.1%	3.0%
Other types of ship	26	3	11.5%	10.0%
Passenger ship	42	3	7.1%	2.6%
Refrigerated cargo vessel	5	1	20.0%	25.0%
Ro-ro cargo ship	6	2	33.3%	25.0%
Ro-ro passenger ship	1	0	0.0%	100.0%
Special purpose ship	8	0	0.0%	20.0%
Tugboat	88	12	13.6%	5.3%
Vehicle carrier	184	9	4.9%	3.9%
Wood-chip carrier	56	2	3.6%	5.8%
Totals	3742	269	7.2%	

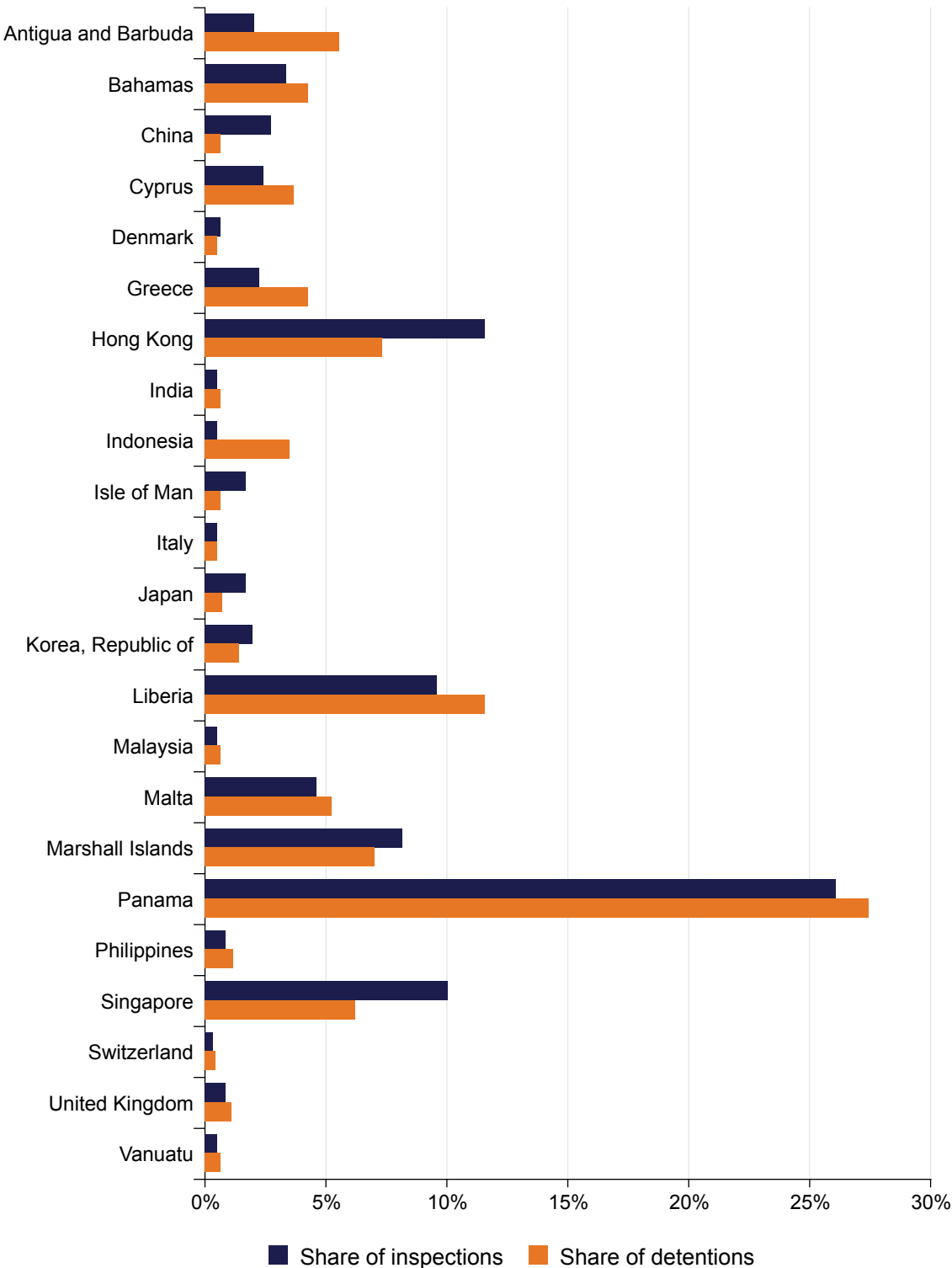
Table 14 – Inspections and detentions by flag State

Flag State	Inspections	Detentions	Detention rate
Antigua and Barbuda	74	15	20.3%
Bahamas	125	11	8.8%
Barbados	3	2	66.7%
Belgium	7	0	0.0%
Belize	2	0	0.0%
Bermuda	16	0	0.0%
Cayman Islands	21	0	0.0%
China	103	1	1.0%
Cook Islands	6	1	16.7%
Croatia	3	0	0.0%
Curacao	3	0	0.0%
Cyprus	86	10	11.6%
Denmark	22	1	4.5%
Dominica	1	1	100.0%
Egypt	3	0	0.0%
Estonia	2	1	50.0%
France	3	0	0.0%
Germany	2	0	0.0%
Gibraltar	14	0	0.0%
Greece	78	11	14.1%
Hong Kong	431	19	4.4%
India	11	1	9.1%
Indonesia	15	10	66.7%
Isle of Man	70	1	1.4%
Italy	15	1	6.7%
Jamaica	1	1	100.0%
Japan	68	2	2.9%
Korea, Republic of	73	4	5.5%
Kuwait	4	0	0.0%
Liberia	350	31	8.9%
Luxembourg	8	1	12.5%
Malaysia	16	2	12.5%
Malta	172	15	8.7%
Marshall Islands	303	19	6.3%
Mauritius	1	0	0.0%
Netherlands	42	0	0.0%
New Zealand	2	0	0.0%
Norway	44	0	0.0%
Pakistan	1	0	0.0%
Panama	1002	74	7.4%
Papua New Guinea	8	2	25.0%
Philippines	29	3	10.3%
Portugal	7	1	14.3%
Saint Vincent and the Grenadines	3	0	0.0%
Samoa	2	0	0.0%
Saudi Arabia	1	0	0.0%
Singapore	376	18	4.8%
Sweden	8	1	12.5%
Switzerland	11	1	9.1%
Taiwan	13	0	0.0%
Thailand	11	0	0.0%
Tonga	2	0	0.0%
Turkey	4	1	25.0%
United Kingdom	34	3	8.8%
United States of America	6	0	0.0%
Vanuatu	18	2	11.1%
Vietnam	6	2	33.3%
Totals	3742	269	7.2%

Another method of determining the relative performance of flag States in terms of detention is to compare the percentage share of the total number of inspections against the percentage share of the total number of detentions for each flag State.

Where the percentage share of detentions is higher than the percentage share of inspections this is an indication that the flag State is not performing well. This representation is given in Figure 4.

Figure 4 – Share of detentions compared to share of inspections



Note: A detailed breakdown of this graph can be found at Appendix A.

Recognised Organisation Performance

Table 15 reports the 2014 performance of relevant Recognised Organisations (ROs) including inspections, deficiency rates, detention rates and the percentage of the detainable items that were allocated RO responsibility for detention. The table indicates that there is a relatively small proportion of detainable deficiencies for which RO responsibility is assigned (an average of 4.4 per cent). The last column of the table shows the variation between 2013 and 2014.

Table 15 – Performance of relevant Recognised Organisations

Recognised Organisation	PSC	Deficiencies	Detentions	Detention rate	Total detainable deficiencies	RO responsible detainable deficiencies	RO responsible share of all detainable deficiencies	RO differential from 2013
American Bureau of Shipping (ABS)	426	1034	26	6.1%	32	2	6.3%	- 5.1%
Biro Klasifikasi Indonesia (BKI)	2	31	1	50.0%	32	2	0.0%	-
Bureau Veritas (BV)	328	1327	35	10.7%	54	1	1.9%	- 4.4%
China Classification Society (CCS)	234	541	10	4.3%	12	1	8.3%	+ 8.3%
China Register Classification Society (CRCS)	4	16	0	0.0%	0	0	0.0%	-
Det Norske Veritas (DNV)	101	230	4	4.0%	5	0	0.0%	-
Det Norske Veritas and Germanischer Lloyd (DNVGL)	451	1339	48	10.6%	67	3	4.5%	+ 4.5%
Germanischer Lloyd (GL)	104	419	13	12.5%	18	0	0.0%	- 3.8%
Indian register of Shipping (IRS)	6	26	1	16.7%	1	0	0.0%	-
Korean register of Shipping (KRS)	257	622	12	4.7%	17	1	5.9%	+ 5.9%
Lloyds Register (LR)	496	1351	32	6.5%	56	1	1.8%	+ 1.8%
Nippon Kaiji Kyokai (NKK)	1282	3756	82	6.5%	106	8	7.5%	- 0.5%
No Class	3	16	1	33.3%	8	0	0.0%	-
Polski Rejestr Statkow (PRS)	3	14	0	0.0%	0	0	0.0%	-
Registro Italiano Navale (RINA)	43	135	2	4.7%	3	0	0.0%	-
Vietnam Register (VR)	2	35	2	100.0%	4	0	0.0%	-
Totals	3742	10,892	269	7.2%	385	17	4.4%	

Risk rating

AMSA uses a risk profiling system to assist in allocating inspection resources in the most effective manner. AMSA's risk calculation uses multiple criteria to categorise vessels into priority groups, each of which has a specific target inspection rate as shown below.

Table 16 – Target inspection rate

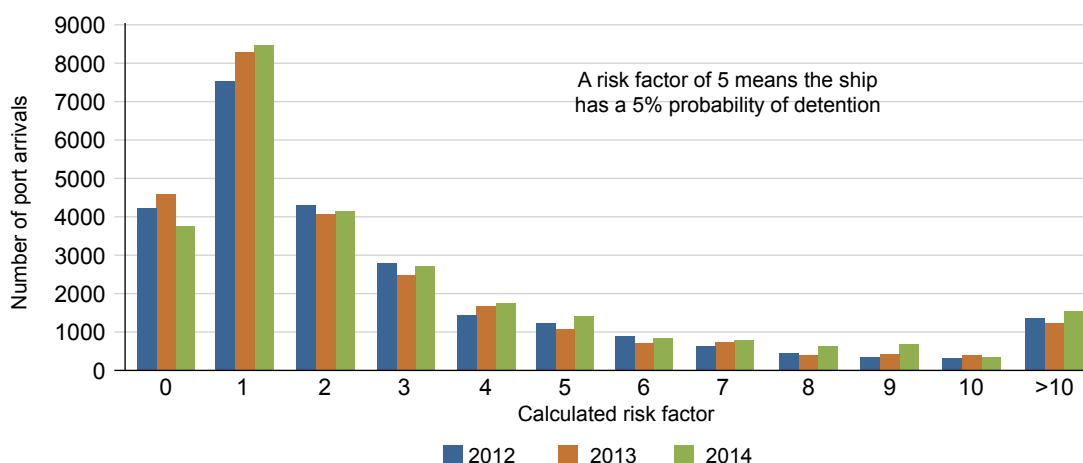
Priority group	Risk factor (Probability of detention)	Target inspection rate
Priority 1	More than 5	80%
Priority 2	4 or 5	60%
Priority 3	2 or 3	40%
Priority 4	0 or 1	20%

The risk profile of ships trading in Australian ports continues to indicate that larger numbers of lower risk ships are arriving at Australian ports. This data, along with inspection details is shown in Table 17.

Table 17 – Unique foreign-flag ships - by priority level

Inspection priority	No. of individual ship arrivals		Eligible ships		Ship inspected		Inspection rate	
	2013	2014	2013	2014	2013	2014	2013	2014
Priority 1	457	500	410	460	385	440	94%	96%
Priority 2	410	441	375	416	319	352	85%	85%
Priority 3	1193	1181	1135	1117	778	768	69%	69%
Priority 4	3387	3552	3294	3464	1468	1705	45%	49%
Totals	5447	5674	5214	5457	2950	3265	57%	60%

Figure 5 – Risk factor of arrivals – foreign-flagged ships



From Figure 5 it is evident that the number of vessels with risk factors of 1 or more arriving in 2014 was higher than in 2013, indicative of the continued aging of some 60 per cent of ships visiting Australia. More importantly, the number of ships in priority Group 4 and above have increased since 2012.

2014 data continues to clearly demonstrate that the number of recorded deficiencies rises as the ship’s Risk Rating increases. This trend continues to reinforce confidence in AMSA’s Risk Rating and Inspection Prioritisation Systems, helping ensure resources are applied where they will have the best effect. There were anomalies in the figures for 2013 which were attributed to AMSA’s regulatory coverage, with the *Navigation Act 2012* applying from July 2013 and the *Maritime Labour Convention, 2006* entering into force on 20 August 2013.

Table 18 – Number of deficiencies according to vessels risk factor

Priority group	2012		2013		2014	
	Number	Average	Number	Average	Number	Average
Priority 1	1838	4.4	1395	3.6	2991	4.4
Priority 2	1165	2.9	720	2.3	1476	3.2
Priority 3	2021	2.4	2368	3.0	3102	2.9
Priority 4	2751	1.8	3700	2.5	3323	2.2
Totals	7775	2.4	8183	2.4	10,892	2.9

How it works

Flag State control (FSC)

AMSA surveyors conduct inspections on Australian-flagged vessels that are subject to the *Navigation Act 2012* on the basis of the same targeting arrangements applied to foreign-flagged shipping.

A total of 80 FSC inspections were conducted on 48 Australian-flagged vessels during 2014, resulting in 323 deficiencies being recorded, of which 3 were serious enough to warrant the detention of vessels. This represents a slight increase from 3.9 in 2013 to 4.0 deficiencies per inspection in 2014. This is above the average for foreign-flag vessels.

The number of FSC detentions decreased from 5 in 2013 to 3 in 2014. This equated to a detention rate of 3.8 per cent which is below the average recorded for foreign-flagged shipping.

Port State control – Australian-flagged ships (overseas)

Australian-flagged ships calling at foreign ports were subject to a total of three PSC inspections by foreign maritime authorities in Singapore, New Zealand and Japan; resulting in three deficiencies and no detentions.

Appeals and review processes

Vessel owners, operators, ROs and flag States all have the right to appeal against inspection outcomes. This can be achieved through a number of different means, with the Master of a vessel advised of these rights upon completion of each PSC inspection.

Masters are instructed that the initial avenue for appeal is through a direct approach to AMSA's Manager, Ship Inspection and Registration. This involves a full examination of all information provided by the appellant and feedback from the attending AMSA marine surveyor to determine the merits of the case being put forward. If an appellant is unsuccessful with this initial AMSA review, further appeal processes are available either by the flag State to the Detention Review Panel of the Tokyo or Indian Ocean Memoranda of Understanding, or to the Australian Administrative Appeals Tribunal.

During 2014, owners, operators, ROs and flag States appealed a number of PSC deficiencies and detentions directly to AMSA, all of which were investigated and responded to accordingly. In total, 28 appeals against vessel detention were received, each underwent a full review of all relevant information, with 3 detentions subsequently rescinded. In the remainder of cases, the original decisions of the AMSA surveyors were found to be appropriate and the appeals rejected. Eight appeals were received from ROs challenging the finding of RO responsibility during the inspection process. AMSA accepted three of these challenges upon review and rejected the others.

There were no appeals raised against AMSA inspections to the Detention Review Panels of either the Tokyo or the Indian Ocean MOUs, and no appeals were lodged with the Australian Administrative Appeals Tribunal against any AMSA PSC inspections.

A full listing of ships detained by AMSA can be found on the Ship Safety section of the AMSA website.

Regional Cooperation

Australia continues to actively participate in both the Asia-Pacific (Tokyo) and Indian Ocean Memoranda of Understanding on port State control, remaining in close contact with our partners, and supporting/sponsoring training seminars and workshops. Throughout 2014, AMSA trained 10 Marine Surveyors under our exchange program – from the People’s Republic of China, South Korea, the Solomon Islands, and New Zealand. Other associated courses included Pollution Response and MLC, 2006 training for foreign partners.

AMSA PSC staff represented Australia at the Sub-Committee on Implementation of IMO Instruments (III, formally the Sub-Committee on Flag State Implementation, FSI) in London from 14-18 July. Our members actively contributing across a wide range of current issues, with the meeting focussing on the global harmonisation of port State activities, the reporting of marine casualty statistics and investigations, and the review of Survey Guidelines under the III Code.

From 1 September to 30 November 2014, Australian participated in a Concentrated Inspection Campaign (CIC) aimed at checking and verifying compliance with the *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers* (STCW). The purpose of the CIC was to ensure that ships are manned correctly, that watchkeeping schedules are equitable and in accordance with the convention’s requirements for balance between work and rest, and that the shipboard management procedures ensured that the crew were able to effectively, efficiently and safely carry out their duties. Over this 3-month period, AMSA conducted a total of 837 inspections covering CIC verification, including the detention of 13 vessels on the basis of STCW identified deficiencies.

Appendix A

Share of detentions compared to share of inspections

Flag State	No of PSC inspections	Deficiencies	Deficiencies per PSC inspection	Detained	Detention rate	PSC share	Detention share
Antigua and Barbuda	74	321	4.34	15	20.3%	2.0%	5.6%
Bahamas	125	371	2.97	11	8.8%	3.3%	4.1%
China	103	222	2.16	1	1.0%	2.8%	0.4%
Cyprus	86	334	3.88	10	11.6%	2.3%	3.7%
Denmark	22	68	3.09	1	4.5%	0.6%	0.4%
Greece	78	167	2.14	11	14.1%	2.1%	4.1%
Hong Kong	431	1077	2.50	19	4.4%	11.5%	7.1%
India	11	30	2.73	1	9.1%	0.3%	0.4%
Indonesia	15	175	11.67	10	66.7%	0.4%	3.7%
Isle of Man	70	128	1.83	1	1.4%	1.9%	0.4%
Italy	15	32	2.13	1	6.7%	0.4%	0.4%
Japan	68	92	1.35	2	2.9%	1.8%	0.7%
Korea, Republic of	73	192	2.63	4	5.5%	2.0%	1.5%
Liberia	230	978	2.79	31	8.9%	9.4%	11.5%
Malaysia	16	48	3.00	2	12.5%	0.4%	0.7%
Malta	172	523	3.04	15	8.7%	4.6%	5.6%
Marshall Islands	303	767	2.53	19	6.3%	8.1%	7.1%
Panama	1002	3272	3.27	74	7.4%	26.8%	27.5%
Philippines	29	138	4.76	3	10.3%	0.8%	1.1%
Singapore	376	1030	2.74	18	4.8%	10.0%	6.7%
Switzerland	11	47	4.27	1	9.1%	0.3%	0.4%
United Kingdom	34	72	2.12	3	8.8%	0.9%	1.1%
Vanuatu	18	47	2.61	2	11.1%	0.5%	0.7%

Note: Average for detentions is 7.2 per cent and average deficiencies per inspection is 2.9 per cent.



Diesel generator insulation saturated with oil



Lifeboat on-load release system



Collapsed fire damper



Day lecture room used for accommodation



Dirty hot water supply



Lifeboat cable protective cover corroded



Service tank valve secured open



Unhygienic shower



Damaged mooring lines



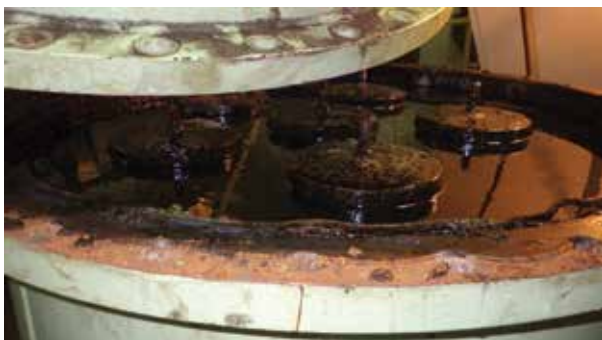
Sewage treatment plant defective



MF-HF radio power alarm



Mooring lines secured on warping drums



Oily water separator full of oil



Defective Hydrostatic release



Photocopied charts



Lifeboat hydrostatic on-load release mechanism locked in open-maintenance position

