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# Port State control Australia—2020 Annual report

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# Purpose of this report

Australia has one of the world's largest mixed market economies and the largest continental landmass surrounded by water. Australia's national livelihood depends on ensuring maritime trade to and from the country remains safe, efficient and compliant with all relevant international conventions. Australia relies on sea transport for the majority of its imports and exports by weight. Port State control (PSC) is an essential element in ensuring the safe operation of ships and protection of the marine environment.

This report summarises the PSC activities of the Australian Maritime Safety Authority (AMSA), detailing the performance of commercial shipping companies, flag States and Classification Societies for the 2020 calendar year.

AMSA is a statutory authority established under the *Australian Maritime Safety Authority Act 1990* (the AMSA Act).

AMSA's principal functions are:

- promoting maritime safety and protection of the marine environment.
- Protecting life at sea by enforcing the safe operation of ships.
- Preventing and combatting ship-sourced pollution in the marine environment.
- Providing infrastructure to support safety of navigation in Australian waters.
- Providing a national search and rescue service to the maritime and aviation sectors.

To meet government and community expectations, AMSA is empowered to perform compliance and enforcement functions, regulating maritime trade in Australia through the implementation of rigorous flag State control (FSC) and PSC regimes. Professional and consistent FSC and PSC regimes are essential in ensuring ships comply with minimum standards of maritime safety, seafarer welfare and protection of Australia's 60,000 kilometre coastline (including approximately 12,000 islands) from environmental damage.

AMSA works in close cooperation with the International Maritime Organization (IMO) and PSC partner nations across the Asia-Pacific and Indian Ocean regions, sharing PSC information and actively participating in international policy development. These efforts are aimed at ensuring AMSA remains a transparent, trusted and consistent member of the international maritime community.

As the flag State for Australian ships, AMSA is responsible for maintaining the operational safety standards of Australian-registered ships, wherever in the world they may be operating.

Noting that information related to AMSA's PSC activities is used by a diverse range of stakeholders on a regular basis, AMSA delivers current information to stakeholders via [the AMSA website](#). This information includes monthly ship detentions, details of ongoing PSC activities, current shipping trends and emerging issues. We also detail and promulgate government regulation and important information through marine orders and marine notices respectively.

## Office locations



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This report and [AMSA detention data available online](#) .

# Year in review

## Introduction

As with all industries, the COVID-19 pandemic presented risks to AMSA's PSC regime throughout 2020. AMSA implemented procedures to protect both our inspectors and ships crews from possible transmission of COVID-19 during inspections. Despite COVID-19 restrictions, AMSA Inspectors undertook 3021 PSC inspections during 2020. While this is a reduction of 6.2 per cent from 2019, it is only a slight reduction of 201 inspections over the full year, or around 4 per week around the entire country. When compared against the number of arrivals, this outcome is a positive achievement as the 6.2 per cent drop in inspections occurred in a period where the total port arrivals decreased by 8.4 per cent, or 2405 less arrivals.

The PSC inspection results for 2020 saw a slight increase in the detention rate of ships from 5.1 per cent in 2019 to 5.9 per cent (The peak in 2011 was 9.2 per cent).

The average deficiency rate also increased from 1.6 deficiencies per inspection in 2019 to 2.1 deficiencies per inspection in 2020. While an increase was observed, the deficiency rate has only been less than 2.1 twice in the last 10 years.

As noted in previous reports, from 2013 onwards, ships and operators with a record of poor performance can be refused access from entering or using Australian ports through a direction issued under section 246 of the *Navigation Act 2012*<sup>1</sup>. In 2020, AMSA refused access to five ships for periods ranging from 3 to 12 months. Four of these directions were issued in response to significant breaches of the *Maritime Labour Convention, 2006* (MLC).

The annual PSC report previously contained a section dedicated to MLC. The information is now contained in a separate dedicated MLC report available on the AMSA website co-located with this report.

This report retains the basic MLC PSC statistics contained in previous reports for the purpose of comparison between deficiency and detention categories.

## 2020 summary of PSC activity

- During the calendar year there were:
  - 26,179 ship arrivals by 6081 foreign-flagged ships
  - 3021 PSC inspections
  - 178 ship detentions.
- Bulk carriers accounted for 54.8 per cent of ship arrivals and 60.9 per cent of PSC inspections.
- PSC inspections were carried out at 46 Australian ports.
- The average gross tonnage per visit was 54,318 GT compared to 52,775 GT in 2019.
- The average age of ships in 2020 was 11 years, compared to 10 years old in both 2019 and 2018.

## 10-year summary of inspection, detentions and deficiency rate

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total inspections	3002	3179	3342	3742	4050	3675	3128	2922	3222	3021
Total detentions	275	210	233	269	242	246	165	161	163	178
Detention %	9.2	6.6	7.0	7.2	6.0	6.7	5.3	5.5	5.1	5.9
Deficiencies per inspection	2.8	2.4	2.4	2.9	2.3	2.4	2.3	1.8	1.6	2.1

## Snapshot comparison to previous year

		2019	2020	When compared to 2019	
Arrivals	Total arrivals	28584	26179	-8.4%	(a decrease of 2405)
	Individual ships which made those arrivals	5981	6081	1.7%	(an increase of 100)
	Ships eligible for PSC inspection	5822	5877	0.9%	(an increase of 55)
PSC inspections	Total PSC inspections	3222	3021	-6.2%	(a decrease of 201)
	Total PSC inspections - by individual ships	2823	2764	-2.1%	(a decrease of 59)
	Inspection rate of eligible ships %	48.5%	47%	-1.5%	(a decrease of 1.5%)
	Total deficiencies	5281	6387	20.9%	(an increase of 1106)
Deficiencies	Total detainable deficiencies	218	270	23.9%	(an increase of 52)
	Rate of deficiencies per inspection	1.6	2.1	0.5	(an increase of 0.5)
Detentions	Total detentions	163	178	9.2%	(an increase of 15)
	Detentions as a % of total inspections	5.1%	5.9%	0.8%	(an increase of 0.8%)

## Key points

- In 2020, the number of foreign-flagged ship arrivals decreased by 2405 (8.4 per cent) to 26,179. The number of arrivals by individual ships increased by 100 to 6081 (up 1.7 per cent).
- The number of initial PSC inspections conducted during 2020 decreased by 201 (6.2 per cent) to 3021.
- The overall number of deficiencies increased to 6387 in 2020, compared to 5281 in 2019.
- The average number of deficiencies per inspection increased to 2.1 in 2020, compared to 1.6 in 2019.
- The number of detainable deficiencies increased to 270 in 2020, compared to 218 in 2019. The largest contributor to this was ISM detainable deficiencies increasing to 76 in 2020, compared to 52 in 2019.
- The number of detained ships increased to 178 in 2020, compared to 163 in 2019. The detention per inspection rate also increased to 5.9 per cent in 2020, compared to 5.1 per cent in 2019.

The deficiencies per inspection remained relatively low in 2020, with only 2018 and 2019 having lower deficiency rates since AMSA first published its annual PSC reports in 1991. The quality of ships coming to Australia continues to be of a high standard. Australia's port State control regime continues to deliver the desired outcome of improved safety and exerts a positive influence on the quality of ships arriving in Australia.

## Top five initial PSC inspections by flag State 2020

There were 3021 foreign-flagged ships inspected in 2020. The top five flag States accounted for 70% of all inspections.	Flag State (number of inspections)
	Panama (703) 23.3%
	Liberia (399) 13.2%
	Marshall Islands (397) 13.1%
	Hong Kong (330) 10.9%
	Singapore (295) 9.8%

### Top five detention rates by flag State 2020

There were a total of 178 foreign-flag ships detained in 2020. The average detention rate for all ships was 5.9%.	Flag State (Detention Rate %)
	1. Denmark – 16.7%
	2. Antigua and Barbuda – 10.8%
	3. Taiwan, China – 10.0%
	4. Norway – 9.1%
	5. Netherlands – 8.7%

Note: this table only covers flag States with 10 or more inspections.

### Trends for 2020

As observed in past PSC annual reports, the most frequent cause of detention since 2010 relates to ineffective implementation of the safety management system (SMS) as required by the International Safety Management (ISM) Code. In 2020 the number of ISM detainable deficiencies increased to 76 (occurring in 2.5% of PSC inspections) compared to 52 in 2019 (occurring in 1.6% of PSC inspections). The rate of structural and equipment deficiencies per inspection increased to 1.1 in 2020 from 0.9 in 2019. This highlights an increase in maintenance issues that are not being addressed by the ships SMS as implemented onboard. This is likely to be related to a combination of factors including:

- An increase in the average age of ships visiting Australia, which increased from 10 years in 2019, to 11 years in 2020.
- Difficulties, as reported by operators, with conducting shore-based maintenance due to COVID-19 restrictions. Operators also reported difficulty in superintendents being able to visit their ships due to COVID-19 restrictions, which affected their ability to conduct on-board audits of the SMS.
- A decrease in investment by Operators to effectively maintain ships due to an economic downturn in industry during the COVID-19 pandemic.

Fire safety (13.7 per cent), life-saving appliances (13.7 per cent) and emergency systems (13.0 per cent) again appeared in the top five categories of detainable deficiencies. These three categories have been in the top five since 2014.

Pollution prevention related detainable deficiencies dropped out of the top five categories for detention, despite the introduction of the sulphur cap which came into effect through MARPOL ANNEX VI on 1 January 2020. To assist industry ahead of the introduction of the sulphur cap, AMSA issued two marine notices in 2019, MN2019/04 (Implementation of the 1 January 2020 low sulphur fuel requirement) and MN2019/05 (Requirements for the use of Exhaust Gas Cleaning Systems in Australian Waters and reporting to AMSA) outlining AMSA's expectations and approach to compliance in this space.

Watertight and weathertight deficiencies moved into the top five detainable deficiencies (8.1 percent) coinciding with the increase in SMS maintenance issues mentioned above.

### Top five detainable deficiencies 2018-2020

2018	2019	2020
ISM – 21.1%	ISM – 23.9%	ISM – 28.1%
Fire safety – 16.8%	Fire safety – 17.4%	Fire safety – 13.7%
Emergency systems – 12.5%	Emergency systems – 16.5%	Lifesaving appliances – 13.7%
Pollution Prevention – 12%	Lifesaving appliances – 14.7%	Emergency systems – 13.0%
Lifesaving appliances – 11.2%	Pollution Prevention – 11.5%	Water/Weather-tight – 8.1%

In 2020, AMSA continued its work with flag States and ship owners to increase awareness of factors that may impact on PSC performance. AMSA is also working jointly with flag States to bring ships into compliance. This includes assisting flag States to access ships in Australian ports in order to conduct their flag State inspections. More information on this process is available at the [flag State administration webpage](#).

### Summary of shipping industry activity 2020

In 2020, iron ore and coal were again the largest bulk exports by value from Australia followed by gas<sup>2</sup>.

The average gross tonnage of visiting ships increased again in 2020, though the number of port visits decreased.

The main trends in 2020 were:

- Foreign-flagged ship port visits totalled 26,179 in 2020, a decrease of 8.4 per cent from 2019. The number of individual ships that made these port calls increased slightly to 6081, an increase of 100 (1.7 per cent) compared to 5981 in 2019.
- Bulk carrier port arrivals (14,337) decreased by 0.6 per cent in 2020 compared to 2019 (14,418) and accounted for 54.8 per cent of foreign-flagged ship port arrivals. Arrivals decreased by 31.9 per cent for oil tankers, 16.7 per cent for vehicle carriers, 15.3% for container ships, 12.6% for general cargo ships and 11.1% for livestock carriers. Arrivals decreased by 35.5% for other ships types, a large proportion of this associated with a reduction in passenger ship arrivals due to COVID-19. Arrivals increased by 6.2 per cent for chemical tankers and 3.2 per cent for gas carriers.
- Foreign-flagged shipping activity remains geographically disparate between Australian ports. Port Hedland remains the busiest Australian port for foreign ship visits, accounting for 12.1 per cent of arrivals in Australia. The top five ports of Port Hedland, Newcastle, Brisbane, Gladstone and Melbourne accounted for 42.4 per cent of arrivals in Australia.
- The trend towards an increase in the size of visiting ships continued with the average gross tonnage increasing to 54,318 GT in 2020 compared to 52,775 GT in 2019. The average age of foreign ships arriving in Australian ports increased from 10 years in 2019, to 11 years in 2020.
- The number of ship visits across all inspection priorities decreased compared to 2019. 75.4 per cent of arrivals were in the lower priority groups of P3 and P4. This is a reflection of the average age of ships arriving in Australia being substantially lower than the world average<sup>3</sup>.

**Table 1—Port visits by priority group**

Priority*	2018		2019		2020	
	Number of visits	Fleet share	Number of visits	Fleet share	Number of visits	Fleet share
P1	4,362	15.0%	4632	16.2%	3831	14.6%
P2	3,220	11.1%	2900	10.1%	2593	9.9%
P3	7,226	24.9%	7407	25.9%	7150	27.3%
P4	14,219	49.0%	13,645	47.7%	12,605	48.1%
Total	29,027	100.0%	28,584	100.0%	26,179	100.0%

\* See [risk rating](#) for more details on priority groups.

**Footnotes:**

1. In exercising this power it is important to note that AMSA only employs this mechanism where routine 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 intent of the process is to improve performance rather than simply remove problem ships from Australian ports.
2. Based on [ABS trade data - 5368.0 International Trade in Goods and Services, Australia, Table 12b](#)
3. Based on [Statista Research Department data](#)

# Deficiencies

## About deficiencies

The IMO defines a deficiency as ‘a condition found not to be in compliance with the requirements of the relevant convention’. Serious deficiencies contribute to the ship being substandard or unseaworthy. AMSA will issue a ship with a deficiency if it is determined, or reasonably suspected, that the condition of a ship, its equipment, or performance of its crew does not comply with the requirements of relevant international conventions.

There was an increase in the number of deficiencies issued in 2020 (6387) compared to 2019 (5281), despite a decrease in the number of PSC inspections from 3222 to 3021. The corresponding deficiency rate increased from 1.6 in 2019 to 2.1 in 2020.

As shown later in Table 10, the rate of deficiencies per inspection by category increased for structure/equipment, human factors and MLC. The deficiency rate for the categories of operational and ISM remained unchanged.

## Deficiencies by category and ship type

For reporting purposes, deficiencies have been categorised into groups that identify key areas of non-compliance, being structural/equipment, operational, human factors, ISM and MLC. Table 8 identifies the number of deficiencies by category along with a comparison of the deficiency rates to those in 2019.

If the number of deficiencies is considered in isolation, as depicted in Table 8, the majority of deficiencies were issued to bulk carriers. However, this is not surprising given bulk carriers accounted for 55 per cent of ship arrivals and 61 per cent of all inspections. In order to assess the performance of ship types, it is necessary to compare the deficiencies per inspection for each category as provided in table 9.

### Top five deficiencies per inspection by ship type 2020

A total of 6377 deficiencies were issued in 2020 with the average deficiencies per inspection being 2.1	Ship type (deficiencies per inspection)
	1. Passenger ship – 3.6
	2. Container ship – 3.3
	3. Ro-ro cargo ship – 3.0
	4. Woodchip carrier – 2.7
	5. General cargo/multi-purpose ship – 2.5

Note: only ship types that had 10 or more inspections are included.

### Table 8—Deficiencies by category and ship type

Ship type	Structural/ equipment	Operational	Human factor	ISM	MLC	PSC inspections
Bulk carrier	2032	568	562	202	741	1,840
Chemical tanker	113	21	24	6	15	235
Combination Carrier	0	0	0	0	0	1
Container ship	436	205	96	36	106	263
Gas carrier	23	7	19	2	7	55
General cargo/multi-purpose ship	171	48	42	17	57	135
Heavy load carrier	17	6	7	3	7	36
Livestock carrier	38	12	8	3	10	29
NLS tanker	37	3	7	4	6	31
Offshore service vessel	13	0	1	2	1	15
Oil tanker	83	28	15	9	20	126
Oil tanker/chemical tanker	4	0	0	0	0	2
Other types of ship	15	8	4	0	1	18
Passenger ship	54	8	10	5	5	23
Refrigerated cargo ship	0	1	0	0	1	1
Ro-ro cargo ship	1	2	2	1	0	2
Ro-ro passenger ship	0	0	0	0	1	1
Special purpose ship	2	4	1	0	0	8
Tugboat	17	9	2	0	2	26
Vehicle carrier	109	22	25	7	26	122
Wood-chip carrier	72	18	15	7	30	52
Totals for 2020	3237	970	840	304	1036	3,021
2020 category deficiency rates	1.1	0.3	0.3	0.1	0.3	2.1
Totals for 2019	2819	839	678	266	673	3222
2019 category deficiency rates	0.9	0.3	0.2	0.1	0.2	1.6

Note: as the category deficiency rates are rounded to one decimal place their sum may differ slightly from the overall deficiency rate.

**Table 9—Rate of deficiencies per inspection by category and ship type**

Note: please use the scroll bar below the table to see the full table.

	Structural/ equipment	Operational	Human factor	ISM	MLC	Total inspections	Total deficiencies	Deficiency rate	No. of detentions	Detention rate
Bulk carrier	1.10	0.31	<b>0.31</b>	0.11	<b>0.40</b>	1,840	4,105	2.23	121	6.6%
Chemical tanker	0.48	0.09	0.10	0.03	0.06	235	179	0.76	7	3.0%
Combination carrier	0.00	0.00	0.00	0.00	0.00	1	0	0.00	0	0.0%
Container ship	<b>1.66</b>	<b>0.78</b>	<b>0.37</b>	<b>0.14</b>	<b>0.40</b>	263	879	3.34	17	6.5%
Gas carrier	0.42	0.13	<b>0.35</b>	0.04	0.13	55	58	1.05	2	3.6%
General cargo/ multi- purpose ship	1.27	0.36	<b>0.31</b>	<b>0.13</b>	<b>0.42</b>	135	335	2.48	14	10.4%
Heavy load carrier	0.47	0.17	0.19	0.08	0.19	36	40	1.11	3	8.3%
Livestock carrier	<b>1.31</b>	0.41	0.28	0.10	0.34	29	71	2.45	2	6.9%
NLS tanker	1.19	0.10	0.23	<b>0.13</b>	0.19	31	57	1.84	1	3.2%
Offshore service vessel	0.87	0.00	0.07	<b>0.13</b>	0.07	15	17	1.13	0	0.0%
Oil tanker	0.66	0.22	0.12	0.07	0.16	126	155	1.23	4	3.2%
Oil tanker/ chemical tanker	<b>2.00</b>	0.00	0.00	0.00	0.00	2	4	2.00	0	0.0%
Other types of ship	0.83	<b>0.44</b>	0.22	0.00	0.06	18	28	1.56	0	0.0%
Passenger ship	<b>2.35</b>	0.35	<b>0.43</b>	<b>0.22</b>	0.22	23	82	3.57	1	4.3%
Refrigerated cargo ship	0.00	1.00	0.00	0.00	<b>1.00</b>	1	2	2.00	0	0.0%
Ro-ro cargo ship	0.50	<b>1.00</b>	<b>1.00</b>	<b>0.50</b>	0.00	2	6	3.00	0	0.0%
Ro-ro passenger ship	0.00	0.00	0.00	0.00	<b>1.00</b>	1	1	1.00	0	0.0%
Special purpose ship	0.25	<b>0.50</b>	0.13	0.00	0.00	8	7	0.88	0	0.0%
Tugboat	0.65	0.35	0.08	0.00	0.08	26	30	1.15	0	0.0%
Vehicle carrier	0.89	0.18	0.20	0.06	0.21	122	189	1.55	4	3.3%
Wood-chip carrier	<b>1.38</b>	0.35	0.29	<b>0.13</b>	<b>0.58</b>	52	142	2.73	2	3.8%
Total	3237	970	840	304	1036	3021	6387	2.1	178	5.9%
Category deficiency rates	1.1	0.3	0.3	0.1	0.3					

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Figures in bold are the top five in each category; Figures in italics are above average.

Note: as the category deficiency rates are rounded to one decimal place their sum may differ slightly from the overall deficiency rate.

**Table 10—Change in deficiency rate per inspection by category only**

<b>Deficiency</b>	<b>2019</b>	<b>2020</b>	<b>Trend</b>
Structure/equipment	0.9	1.1	↑
Operational	0.3	0.3	-
Human factors	0.2	0.3	↑
ISM	0.1	0.1	-
MLC	0.2	0.3	↑

# Detentions

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’.

## Detainable deficiencies by category

Table 11 shows the proportion of detainable deficiencies in different categories over a three- year period. As indicated in the table, the detainable deficiencies relating to the category of ISM increased in 2020, while the categories of fire safety, emergency systems, lifesaving appliances and water/weather-tight conditions round out the top five categories of detainable deficiencies. The proportion of MLC related detentions dropped to seventh place (previously in sixth place since 2014) but remains significant. AMSA exercised flexibility and worked with industry in its dealings with MLC related deficiencies during the height of the COVID-19 pandemic. Flexibility and proactive work with industry, specifically around seafarer repatriation prevented a significant surge in detainable deficiencies relating to MLC.

The relatively high proportion of detainable deficiencies attributed to the ISM category suggests that safety management systems (SMS) are not properly and effectively implemented onboard as was intended. While the proportion may be considered to be a cause of concern history provides context. In 2013, the number of ISM detainable deficiencies peaked at 120 (31.2 per cent share of detainable deficiencies), this number was 76 (28.1 per cent share of detainable deficiencies) in 2020.

Shipboard operations and maintenance were again the highest contributors to ISM detentions, followed by emergency preparedness. The implementation of SMS procedures relating to safety of navigation continued to make a relatively high contribution to shipboard operations ISM detentions in 2020.

### Table 11—Detainable deficiencies by category

Category	2018 number of deficiencies	2018 Share %	2019 number of deficiencies	2019 Share %	2020 number of deficiencies	2020 Share %
ISM	49	21.1%	52	23.9%	76	28.1%
Fire safety	38	16.4%	38	17.4%	37	13.7%
Lifesaving appliances	26	11.2%	32	14.7%	37	13.7%
Emergency systems	29	12.5%	36	16.5%	35	13.0%
Water/weather-tight conditions	12	5.2%	9	4.1%	22	8.1%
Pollution prevention	28	12.0%	25	11.5%	21	7.8%
Labour conditions	21	9.1%	15	6.9%	19	7.0%
Other	12	5.2%	0	0.0%	9	3.3%
Cargo operations including equipment	0	0.0%	0	0.0%	5	1.9%
Certificates and documentation	0	1.3%	3	1.4%	3	1.1%
Structural conditions	2	0.9%	0	0.0%	2	0.7%
Alarms	1	0.4%	0	0.0%	2	0.7%
Radio communications	2	0.9%	4	1.8%	1	0.4%
Propulsion and auxiliary machinery	0	2.2%	0	0.0%	1	0.4%
Safety of navigation	3	1.3%	4	1.8%	0	0.0%
Dangerous goods	0	0.0%	0	0.0%	0	0.0%
International Ship and Port Facility Security Code (ISPS)	0	0.0%	0	0.0%	0	0.0%

## Detentions by ship type

In 2020 AMSA detained 178 ships with an average detention rate of 5.9 per cent compared to 163 ships detained in 2019 with an average detention rate of 5.1 per cent.

**Table 12—Top five detention rates by ship type in 2019 and 2020**

AMSA detained 178 ships in 2020, with an average detention rate of 5.9%.	<b>2019 – 5.1% average (number of detentions)</b>	<b>2020 – 5.9% average (number of detentions)</b>
	Offshore service vessel – 16.7% (2)	General cargo/multi-purpose ship -- 10.4% (14)
	Heavy load carrier – 10% (4)	Heavy load carrier – 8.3% (3)
	General cargo/multi-purpose ship – 7.8% (10)	Livestock carrier – 6.9% (2)
	Container ship – 6.7% (22)	Bulk carrier – 6.6% (121)
	Bulk carrier – 5.9% (107)	Container ship – 6.5% (17)

Note: only ship types with 10 or more inspections are included.

The poorest performing ship type was general cargo ships, followed by heavy load carriers and livestock carriers. General cargo ships have been in the top five poorest performing ship types for the past seven years while container ships have been in the top five for the past three years.

Bulk carriers represented the largest number of PSC detentions, as shown in Table 13. This is expected given the significant proportion of bulk carrier arrivals and the number of ships eligible to be inspected<sup>4</sup>. The bulk carrier detention rate increased to 6.6 per cent, above the 5.9 per cent average for all ships in 2020. This is a continuing trend as bulk carriers have exceeded the average detention rate for the last five years and are the fourth worst performing ship type in 2020.

**Table 13—Detentions by ship type**

Category	2020			2019
	Inspections	Detentions	Detention rate	Detention rate
Ship type				
Bulk carrier	1,840	121	6.6%	5.9%
Chemical tanker	235	7	3.0%	3.5%
Combination carrier	1*	0	0.0%	0.0%
Container ship	263	17	6.5%	6.7%
Gas carrier	55	2	3.6%	1.3%
General cargo/multi-purpose ship	135	14	10.4%	7.8%
Heavy load carrier	36	3	8.3%	10.0%
Livestock carrier	29	2	6.9%	3.6%
NLS tanker	31	1	3.2%	3.3%
Offshore service vessel	15	0	0.0%	16.7%
Oil tanker	126	4	3.2%	0.6%
Oil tanker/chemical tanker	2*	0	0.0%	0.0%
Other types of ship	18	0	0.0%	0.0%
Passenger ship	23	1	4.3%	0.0%
Refrigerated cargo ship	1*	0	0.0%	0.0%
Ro-ro cargo ship	2*	0	0.0%	0.0%
Ro-ro passenger ship	1*	0	0.0%	0.0%
Special purpose ship	8*	0	0.0%	0.0%
Tugboat	26	0	0.0%	0.0%
Vehicle carrier	122	4	3.3%	2.9%
Wood-chip carrier	52	2	3.8%	1.6%
Totals	3021	178	5.9%	5.1%

\* As there are less than 10 inspections of this ship type these are not counted in the performance assessment.

The following is notable with regard to detention by ship type in 2020:

- 1840 bulk carriers were inspected with 4105 deficiencies issued resulting in 121 detentions. The detention rate for bulk carriers increased to 6.6 per cent from 5.9 per cent in 2019.
- Offshore service vessels had zero detentions from 15 inspections compared to two detentions from 12 inspections in 2019.
- Tugboats had zero detentions from 26 inspections.
- General cargo ships had the highest detention rate at 10.4 per cent, a 2.6 per cent increase compared to 2019.
- Oil tankers had a detention rate of 3.2 per cent, a 2.6 per cent increase compared to 2019, but still well below the 2020 average of 5.9 per cent.
- Heavy load carriers had the second highest detention rate at 8.3 per cent, a 1.7 per cent decrease compared to 2019.
- General cargo ships and heavy load carriers had the top two highest detention rates in both 2019 and 2020.

### Detentions by flag State

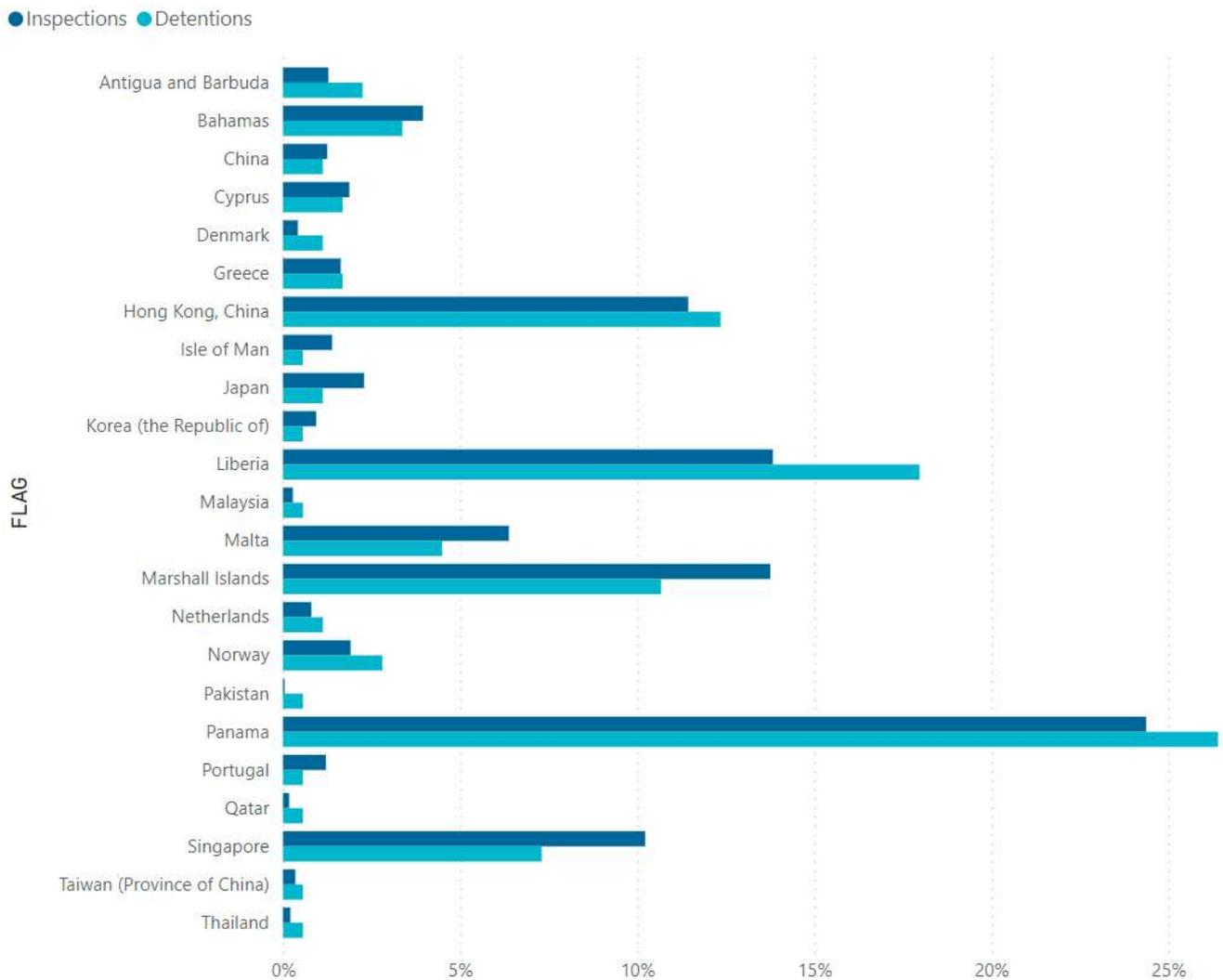
Individual flag State performance can be determined by comparing the percentage share of the number of inspections against the percentage share of the number of detentions for each flag State. Where the percentage share of detentions is higher than the percentage share of inspections, this is an indication that the ships of that flag State are performing below average. This is represented in Figure 4.

#### Top five detention rates by flag State 2020

There was a total of 178 foreign-flag ships detained in 2020. The average detention rate for all ships was 5.9%.	Flag State (Detention Rate %)
	1. Denmark - 16.7%
	2. Antigua and Barbuda - 10.8%
	3. Taiwan (Province of China) - 10.0%
	4. Norway - 9.1%
	5. Netherlands - 8.7%

Note: this table only covers ship types with 10 or more inspections.

Figure 4 – Share of detentions compared to share of inspections



Note: a detailed breakdown of this graph can be found [in the Appendix](#) .

Where a flag State is subject to a small number of inspections, a single detention can result in the flag State exceeding the average detention rate, as shown in Table 15. This may not be an accurate measure of performance. A more accurate assessment of performance of individual flag States can be drawn by comparing detention rates over three years, as shown in Table 14. This table shows that Antigua and Barbuda, Liberia and Panama have all exceeded the overall average detention rate over the three years from 2018 to 2020.

**Table 14—Flag States that exceeded the average in 2018, 2019 and 2020 (note this only covers flag States with 10 or more inspections each year)**

2018 (average 5.5%)		2019 (average 5.1%)		2020 (average 5.9%)	
Flag State	Detention rate (number)	Flag State	Detention rate (number)	Flag State	Detention rate (number)
India	18.2% (2)	<i>Antigua and Barbuda</i>	13.3% (4)	<b>Denmark</b>	16.7% (2)
<i>Antigua and Barbuda</i>	16.1% (5)	Cayman Islands	10.3% (3)	<i>Antigua and Barbuda</i>	10.8% (4)
Italy	14.3% (3)	<b>Cyprus</b>	9.1% (6)	Taiwan (Province of China)	10.0% (1)
<b>Philippines</b>	13.0% (3)	<b>Philippines</b>	9.1% (1)	Norway	9.1% (5)
<b>Portugal</b>	9.8% (4)	<b>Denmark</b>	8.3% (2)	<b>Netherlands</b>	8.7% (2)
<i>Liberia</i>	9.4% (32)	Malaysia	8.3% (1)	<i>Liberia</i>	8.0% (32)
<b>Cyprus</b>	7.9% (5)	<i>Liberia</i>	6.7% (27)	<i>Panama</i>	6.7% (47)
Japan	7.4% (4)	Greece	6.3% (4)	<b>Hong Kong, China</b>	6.7% (22)
<b>Hong Kong, China</b>	6.5% (20)	<i>Panama</i>	6.3% (43)	<b>Greece</b>	6.4% (3)
<i>Panama</i>	5.9% (37)	Luxembourg	6.3% (1)		
<b>Netherlands</b>	5.6% (1)	Malta	5.8% (11)		
Republic of Korea	5.6% (2)	Isle of Man	5.6% (3)		
		<b>Portugal</b>	5.3% (2)		

Bold text=Exceeded the average detention rate in two years out of three

Italics=Exceeded the average detention rate in three years out of three

**Table 15—Inspections and detentions by flag State**

Flag State	Inspections	Detentions	Detention rate
ANTIGUA AND BARBUDA	37	4	<b>10.8%</b>
BAHAMAS	114	6	5.3%
BARBADOS	2	0	0.0%
BELGIUM	12	0	0.0%
BERMUDA	7	0	0.0%
CAYMAN ISLANDS	29	0	0.0%
CHINA	36	2	5.6%
COOK ISLANDS	8	0	0.0%
CROATIA	1	0	0.0%
CYPRUS	54	3	5.6%
DENMARK	12	2	<b>16.7%</b>
FRANCE	3	0	0.0%
GERMANY	1	0	0.0%
GIBRALTAR	2	0	0.0%
GREECE	47	3	<b>6.4%</b>
HONG KONG, CHINA	330	22	<b>6.7%</b>
INDIA	5	0	0.0%
ISLE OF MAN	40	1	2.5%
ITALY	20	0	0.0%
JAPAN	66	2	3.0%
KOREA (THE REPUBLIC OF)	27	1	3.7%
KUWAIT	3	0	0.0%
LIBERIA	399	32	<b>8.0%</b>
LUXEMBOURG	5	0	0.0%
MALAYSIA	8	1	12.5%
MALTA	184	8	4.3%
MARSHALL ISLANDS	397	19	4.8%
NETHERLANDS	23	2	<b>8.7%</b>
NEW ZEALAND	1	0	0.0%
NORWAY	55	5	<b>9.1%</b>
PAKISTAN	1	1	100.0%
PANAMA	703	47	<b>6.7%</b>
PAPUA NEW GUINEA	1	0	0.0%
PHILIPPINES	9	0	0.0%
PORTUGAL	35	1	2.9%
QATAR	5	1	20.0%
SINGAPORE	295	13	4.4%
SPAIN	1	0	0.0%
SWEDEN	2	0	0.0%
SWITZERLAND	1	0	0.0%
TAIWAN (PROVINCE OF CHINA)	10	1	<b>10.0%</b>
THAILAND	6	1	16.7%
TURKEY	1	0	0.0%
TUVALU	2	0	0.0%
UNITED KINGDOM	18	0	0.0%

<b>Flag State</b>	<b>Inspections</b>	<b>Detentions</b>	<b>Detention rate</b>
VANUATU	3	0	0.0%
Total:	3021	178	5.9%

Note: flag States above the average detention rate with more than 10 inspections are provided in bold.

Footnote:

4. All foreign flag ships are eligible for inspection six months from a previous inspection by AMSA or on their first arrival at an Australian port.

# Detention appeals and review processes

Ship owners, operators, Recognised Organisations (RO)<sup>5</sup> and flag States all have the right to appeal against inspection outcomes and AMSA actively encourages these parties to appeal if they believe it is warranted. Appeals can be made through a number of different mechanisms and the master of a ship is advised of their right to appeal at the conclusion of each PSC inspection.

Masters are advised that the initial avenue for review is through a direct approach to the Manager Ship Inspection and Registration. This involves an examination of all information provided by the applicant and feedback from the attending AMSA Inspector to determine the merits of the case 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 Memorandum of Understanding (MOU), or to the Australian Administrative Appeals Tribunal (AAT).

During 2020, AMSA received 20 appeals against ship detention, with each undergoing a full review of all information provided. In one instance, upon review there was insufficient evidence to support the detention and the inspection was amended to expunge the detainable deficiency.

AMSA received eight appeals from ROs challenging the assignment of RO responsibility during the inspection process. AMSA accepted three of these challenges upon review and amended the inspection record accordingly. The remainder were rejected.

There was one appeal lodged against an AMSA inspection to the Detention Review Panel of the Tokyo MOU, during the reporting period. The review panel concluded that the AMSA detention was warranted.

There were three appeals lodged against AMSA inspections to the AAT, two of these were withdrawn by the applicants and one remains under review at the time of this report.

A full list of ships [AMSA detained in 2020](#) , can be found on the AMSA website.

## Footnote:

5. RO can appeal the assignment of RO Responsibility for a detainable deficiency but not the detention itself.

# Recognised organisation performance

The performance of Recognised Organisations (RO) in 2020, including inspections, deficiency rates, detention rates and the percentage of the detainable deficiencies that were allocated RO responsibility are recorded in Table 16. The table shows a relatively small proportion of detainable deficiencies assigned to ROs. However, the average in RO responsible detainable deficiencies increased to 6.3 per cent compared to 5.0 per cent in 2019.

## Performance of Recognised Organisations

Recognised Organisation	PSC inspection	Deficiencies	Detentions	Detention rate	Detainable deficiencies	RO responsible detainable deficiencies	RO responsible as share of all detainable deficiencies
American Bureau of Shipping (ABS)	420	786	20	4.8%	30	0	0.0%
Bureau Veritas (BV)	277	687	17	6.1%	24	1	4.2%
China Classification Society (CCS)	151	235	11	7.3%	16	0	0.0%
CR Classification Society (CCRS)	14	21	0	0.0%	0	0	0.0%
Croatian Register of Shipping (CRS)	24	21	0	0.0%	0	0	0.0%
DNV GL AS (DNVGL)	519	1182	30	5.8%	47	1	2.1%
Indian Register of Shipping (IRS)	3	13	0	0.0%	0	0	0.0%
Korean Register of Shipping (KRS)	139	382	8	5.8%	1	4	30.8%
Lloyd's Register (LR)	393	765	23	5.9%	45	3	6.7%
Nippon Kaiji Kyokai (NKK)	1005	2102	64	6.4%	87	8	9.2%
Polski Rejestr Statkow (PRS)	1	13	1	100.0%	2	0	0.0%
RINA Services SpA (RINA)	66	155	4	6.1%	6	0	0.0%
No class	9	25	0	0.0%	0	0	0.0%
<b>Totals:</b>	3021	6387	178	5.9%	270	17	6.3%

**Note:** the results for DNV and GL have been merged into DNV GL.

# Risk rating

AMSA continues to use a dynamic risk profiling system to assist in allocating inspection resources in the most effective manner. The risk factor does not mean the ship is a high risk as such, it is simply a statistical tool to prioritise inspections. AMSA's risk calculation uses multiple criteria to categorise ships into four priority groups, to calculate a risk factor for the 'probability of detention'. Each group has a specific target inspection rate as shown below.

**Table 17—Target inspection rate**

Priority group	Risk factor (probability of detention)	Target inspection rate
Priority 1	6 or higher	80%
Priority 2	4 or 5	60%
Priority 3	2 or 3	40%
Priority 4	0 or 1	20%

The risk profile of ships visiting Australian ports shows an increase in unique arrivals of priority two, three and four ships and a decrease in the unique arrivals of priority one ships. Table 18 shows that AMSA achieved targeted inspection rates in all priority groups with an overall inspection rate of 43.8 per cent. This was achieved despite the challenges of COVID-19 due to early implementation of precautionary measures to protect AMSA inspectors and ship's crew during inspections.

Table 18 shows the number of inspections where no deficiencies were recorded. The data for 2020 indicates that 48.1 per cent of all inspections (1453 out of 3021 PSC inspections) resulted in no deficiencies being issued.

The fact that risk factor is not representative of the level of risk posed by all ships in a particular group is reflected in the proportion of ships in P1 and P2 where no deficiencies were identified.

**Table 18—Unique foreign-flagged ships - by priority group**

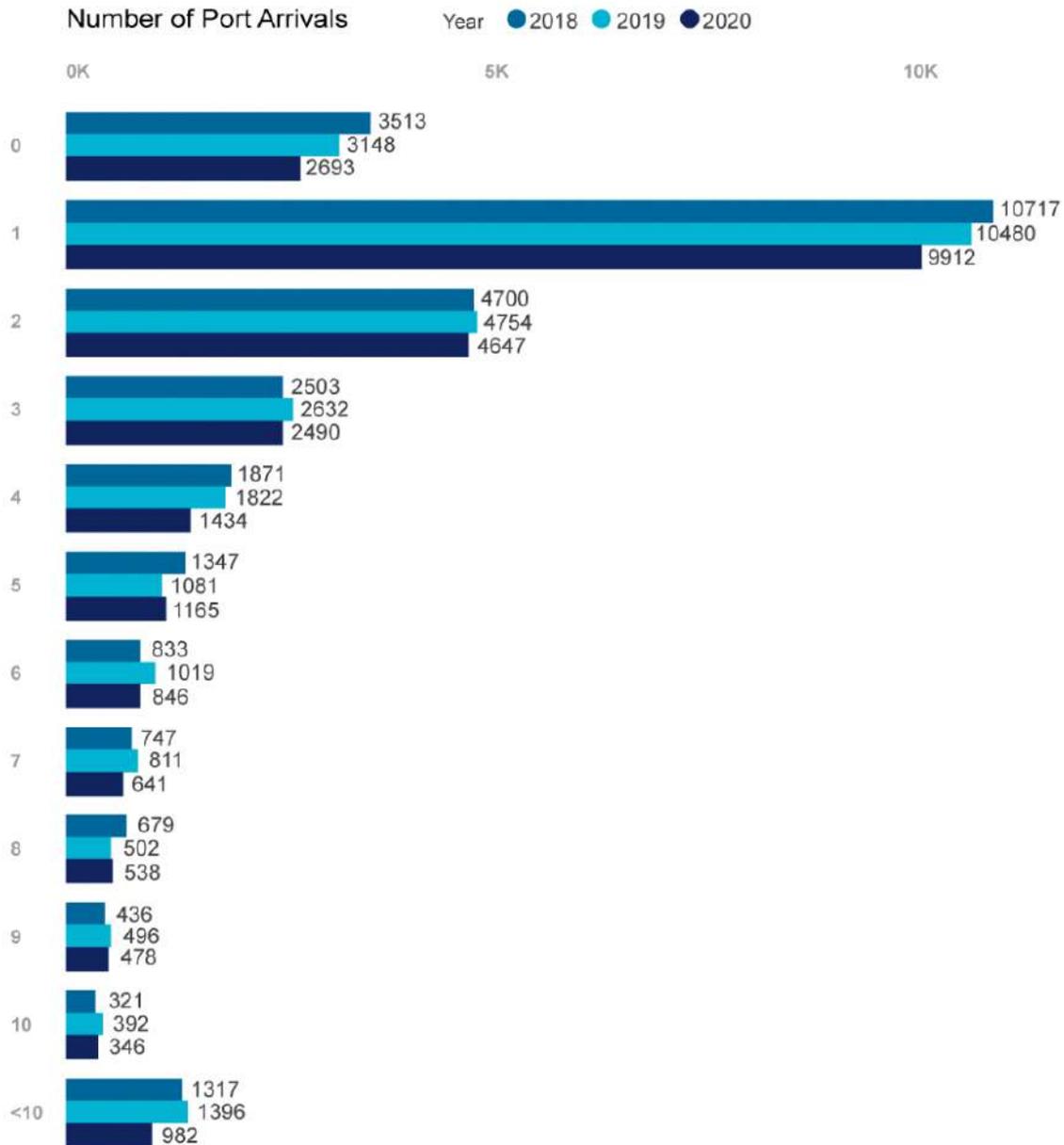
Inspection priority	Ship arrivals		Eligible ships		Ships inspected		Inspection rate		Inspections with no deficiencies	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Priority 1	631	613	431	397	393	334	91.4%	84.1%	194 39.7%	152 40.2%
Priority 2	660	694	453	467	329	315	72.6%	67.5%	164 46.1%	134 39.4%
Priority 3	2022	2,152	1686	1777	845	850	50.1%	47.8%	467 51.4%	404 45.1%
Priority 4	3939	3,961	3883	3898	1366	1367	35.2%	35.1%	907 61.8%	763 54.2%
<b>Totals:</b>	<b>7252</b>	<b>7,420</b>	<b>6453</b>	<b>6,539</b>	<b>2933</b>	<b>2,866</b>	<b>45.5%</b>	<b>43.8%</b>	<b>1732 53.8%</b>	<b>1453 48.1%</b>

Note: ship numbers may not match if a ship arrives multiple times over the year and the priority changes.

## Number of deficiencies by ship Priority Group

Priority group	2019		2020	
	Deficiencies	Deficiencies per inspection	Deficiencies	Deficiencies per inspection
Priority 1	1285	2.6	1236	3.3
Priority 2	704	2.0	817	2.4
Priority 3	1580	1.7	1915	2.1
Priority 4	1712	1.2	2419	1.7
Totals	5281	1.6	6387	2.1

Figure 5 - Risk factor (RF) of arrivals - foreign-flagged ships



It is evident that the number of ships, of all risk factors, remained relatively consistent in 2020, compared with the results in 2019.

# How it works

## Flag State control (FSC)

AMSA Inspectors conduct inspections on Australian-flagged ships subject to the Navigation Act 2012 using the same targeting arrangements applied to foreign-flagged ships.

AMSA conducted 87 initial FSC inspections on 77 Australian-flagged ships during 2020, resulting in 210 deficiencies being recorded, five of which were detainable deficiencies resulting in the detention of one ship. The average number of deficiencies per inspection in 2020 remained unchanged from 2019 at 2.4, which was slightly above the average recorded for foreign-flagged ships during the same period (2.1).

The number of FSC detentions decreased to one in 2020, from three in 2019. This equated to a detention rate of 1.1 per cent, which is well below the average recorded for foreign-flagged ships during the same period (5.9 per cent).

## Port State control – Australian-flagged ships (overseas)

Australian-flagged ships calling at foreign ports were subject to a total of 11 PSC inspections by foreign maritime authorities, resulting in eight deficiencies and no detentions.

## Focused inspection campaign

From 1 August 2020 to 31 October 2020, AMSA conducted a focused inspection campaign (FIC) on containerised cargo securing arrangements. This was to verify that containerised cargo was stowed and secured in accordance with Chapter VI of the International Convention for the Safety of Life at Sea (SOLAS). Over this three-month period, AMSA conducted a total of 208 FIC inspections. Two ships were detained as a direct result of the FIC.

Find [more information on the FIC results](#) .

## Refusal of a ship's access and condition of entry

Australia is a signatory to various International Maritime Organization (IMO) and International Labour Organization (ILO) conventions which aim to ensure ships are safe.

Ships that are not operated and managed to meet applicable minimum standards and relevant Australian laws pose an increased risk to seafarers, ships and the environment. The *Navigation Act 2012* gives AMSA the power to direct that a ship be refused access to Australian ports. AMSA exercises that power on occasions where a ship is repeatedly detained, has a poor PSC record, or there are concerns about the performance of the ship operator.

We provide access to our [policy on refusing access on our website](#) .

AMSA can issue a ship with a direction not to enter or use an Australian port (or ports) for a set period of time, as deemed necessary. When considering ship performance, AMSA also looks at the performance of the entire company responsible for the operations of the ship. Where the company's performance is also deemed unacceptable, the periods for which the ship is not permitted to enter an Australian port may be extended. A direction resulting from a detention will generally take effect as soon as the ship leaves the Australian port or anchorage following rectification of the detainable deficiency.

We publish a list of ships that are [refused access to Australian ports on our website](#) .

Table 20 lists the ships issued with directions not to enter or use an Australian port in 2020.

**Table 20—Ships issued with directions<sup>7</sup>**

Ship name and IMO number	Flag	Direction	Issue date	Expiry
<i>AC Sesoda (9470791)</i>	Panama	Refused access for 12 months	17/09/2020	17/09/2021
<i>BBC Rio (9430222)</i>	Hong Kong	Refused access for 3 months	04/09/2020	04/12/2020
<i>Unison Jasper (9838436)</i>	Hong Kong	Refused access for 6 months	29/08/2020	25/02/2021
<i>TW Hamburg (9603520)</i>	Liberia	Refused access for 12 months	29/07/2021	29/07/2021
<i>Agia Sofia (9706786)</i>	Liberia	Refused access for 6 months	27/07/2020	24/01/2021

## High performing operators

When considering ship performance AMSA also considers the performance of the operator in respect of the detention and deficiency rates of the ships they operate. In this report AMSA has identified operators that are considered high performing.

This is assessed on the following basis:

- At least 10 inspections during the year (less than 10 is not statistically significant)
- No detentions during the year
- A deficiency rate at no more than 70 per cent of the average deficiency rate for the year.

Applying these criteria to data for 2020 AMSA identified 25 high performing operators as listed in Table 21 below.

**Table 21—High performing operators 2020**

ISM company name	PSC Inspections	Deficiency Rate
Thome Ship Management Pte Ltd	14	0.1
Eastern Pacific Shipping Pte. Ltd	10	0.2
Wilhelmsen Ship Management AS	13	0.2
Maran Dry Management Inc	17	0.3
Berge Bulk Maritime Pte Ltd	17	0.4
Wilhelmsen Ship Management Sdn Bhd Malaysia	12	0.4
Anglo-Eastern Shipmanagement (S) Pte Ltd	11	0.5
Cosco Shipping Bulk co., ltd.	35	0.5
Scorpio House, Mumbai, India	23	0.6
Anglo-Eastern (Antwerp) NV	11	0.6
Zenith Gemi Isletmeciligi AS	14	0.6
NYK Shipmanagement pte ltd	21	0.8
MOL Ship Management Singapore pte ltd	13	0.8
Fleet Management ltd	36	0.8
Mms co ltd	13	0.8
H-line shipping co ltd	10	0.9
NS United Kaiun Kaisha, Ltd.	21	1.0
Anglo-Eastern (UK) Ltd	19	1.0
TMS Dry Ltd	18	1.1
Bernhard Schulte Shipmanagement (Singapore) Pte Ltd	17	1.1
'K' Line RoRo Bulk Ship Management Co Ltd	50	1.3
First Marine Service Co Ltd	11	1.3
PACC Ship Managers pte ltd	11	1.4
Uniteam Marine Shipping Gmbh	10	1.4
Stolt Tankers Holdings BV	17	1.4

**Footnote:**

7. The full list of ships which have been refused access to Australian ports, or issued letters of warning .

# Appendix

## Share of detentions compared to share of inspections

In 2020, detentions occurred in 5.9 per cent of all inspections, and the rate of deficiencies per inspection was 2.1.

Flag State	Number of PSC inspections	Deficiencies	Deficiencies per PSC inspection	Detained	Detention rate	PSC share	Detention share
Antigua and Barbuda	37	61	1.65	4	10.8%	1.22%	2.25%
Bahamas	114	253	2.22	6	5.3%	3.77%	3.37%
Belgium	12	17	1.42	0	0.0%	0.40%	0.00%
Cayman Islands	29	33	1.14	0	0.0%	0.96%	0.00%
China	36	65	1.81	2	5.6%	1.19%	1.12%
Cyprus	54	111	2.06	3	5.6%	1.79%	1.69%
Denmark	12	25	2.08	2	16.7%	0.40%	1.12%
Greece	47	78	1.66	3	6.4%	1.56%	1.69%
Hong Kong, China	330	697	2.11	22	6.7%	10.92%	12.36%
Isle of Man	40	28	0.70	1	2.5%	1.32%	0.56%
Italy	20	28	1.40	0	0.0%	0.66%	0.00%
Japan	66	70	1.06	2	3.0%	2.18%	1.12%
Korea (The Republic of)	27	60	2.22	1	3.7%	0.89%	0.56%
Liberia	399	891	2.23	32	8.0%	13.21%	17.98%
Malta	184	311	1.69	8	4.3%	6.09%	4.49%
Marshall Islands	397	829	2.09	19	4.8%	13.14%	10.67%
Netherlands	23	56	2.43	2	8.7%	0.76%	1.12%
Norway	55	72	1.31	5	9.1%	1.82%	2.81%
Panama	703	1,838	2.61	47	6.7%	23.27%	26.40%
Portugal	35	56	1.60	1	2.9%	1.16%	0.56%
Singapore	295	542	1.84	13	4.4%	9.76%	7.30%
Taiwan (Province of China)	10	25	2.50	1	10.0%	0.33%	0.56%
United Kingdom	18	43	2.39	0	0.0%	0.60%	0.00%
<b>Total</b>	<b>2943</b>	<b>6189</b>		<b>174</b>			

Note: this table only covers flag States with 10 or more inspections.

Source URL: <https://www.amsa.gov.au/port-state-control-australia-2020-annual-report>