The First Safety Meeting of Ship Management Company, 2018

PSC Session

CCS Headquarters
January 2018

Contents

I. General Status of PSC Inspections of CCS Ships in 2017

1. General Status:

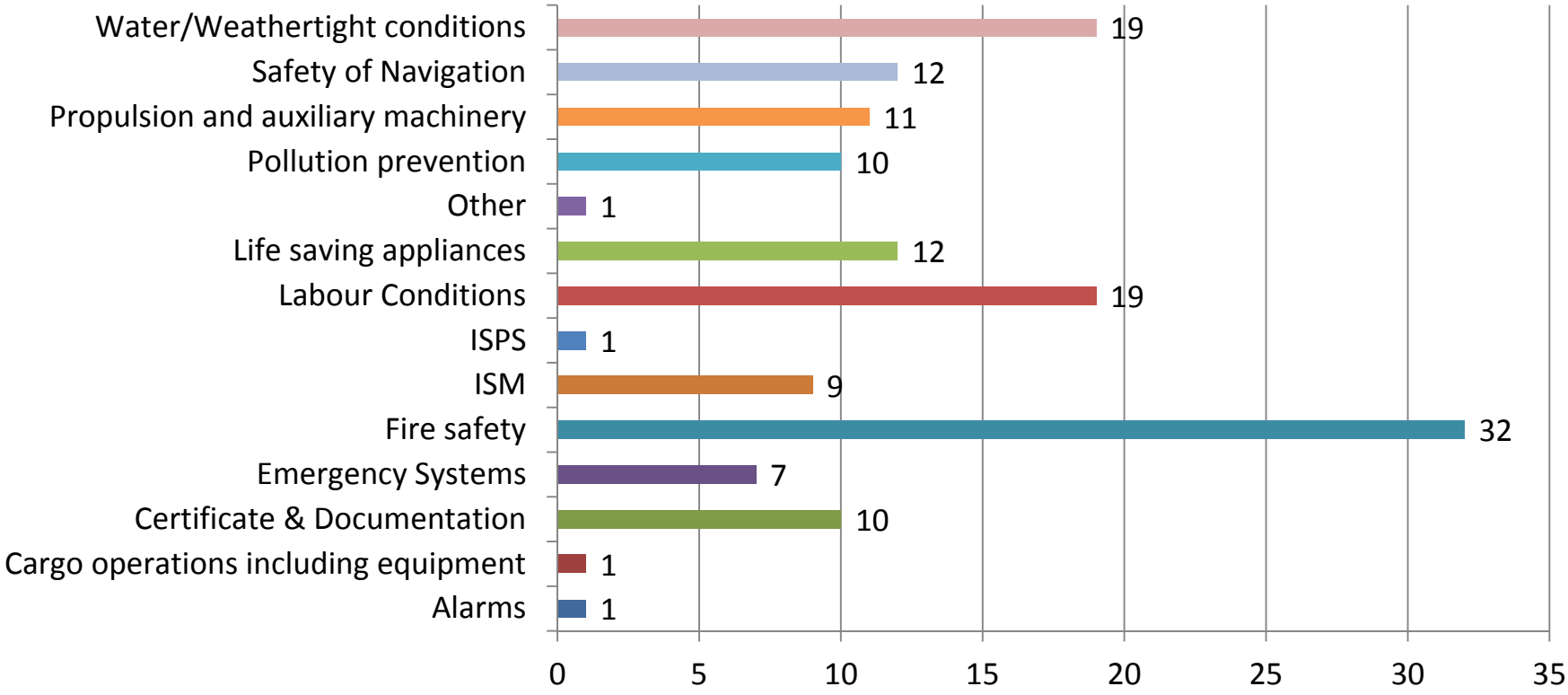
- **TOKYO MOU**: A total of 3,219 inspections were carried onboard CCS classed ships, among which 11 were detained, with a detention rate of **0.35**%;
- **PARIS MOU**: A total of 290 inspections carried onboard CCS classed ships, among which 3 were detained, with a detention rate of 1.03%;
- **USCG**: Approximately 289 inspections carried onboard CCS classed ships, among which 1 was detained, with a detention rate of 0.35%.
- In summary, a total of 3,708 CCS classed ships were inspected in the PSC inspections carried out by the three organizations, among which 15 were detained, with a detention rate of 0.40.
- Among above-mentioned statistics, 2 non-CCS-classed ships with SMC and MLC certificates issued by CCS were detained by PSC of Germany and Canada due to severe deficiency of ISM and MLC.
- Number of detained CCS-classed ships were continuously declinning during past 3 years: 29 ships in 2015, 25 in 2016, and 15 in 2017. 10 ships, which makes it 40% decreased in 2017 compared to the year of 2016.

Grateful to shipping companies for the great contribution you made for reducing PSC detention!

I. General Status of PSC Inspections of CCS Ships in 2017

2. Statistics of all deficiencies

For the 15 CCS-classed ships that received detention report and carried out investigation, 145 deficiencies were detected, with the average of 9.67 deficiencies per ship, which witnessed a rising tendency compared to the average of 8.83 deficiencies per ship in 2016.

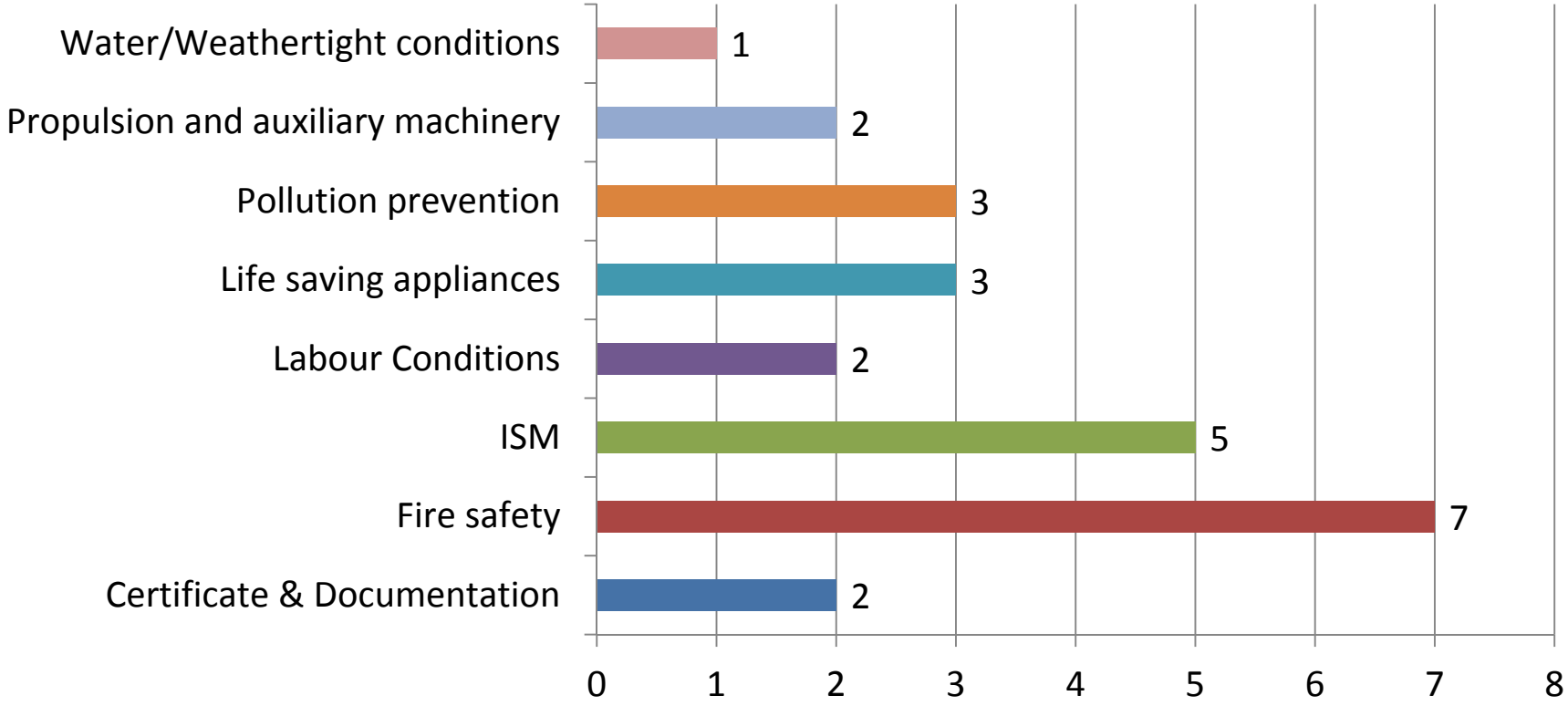


More deficiencies were revealed related to fire safety, weather tight, working condition, navigation safety, and life-saving equipment, etc.

I. General Status of PSC Inspections of CCS Ships in 2017

3. Statistics of detention deficiencies

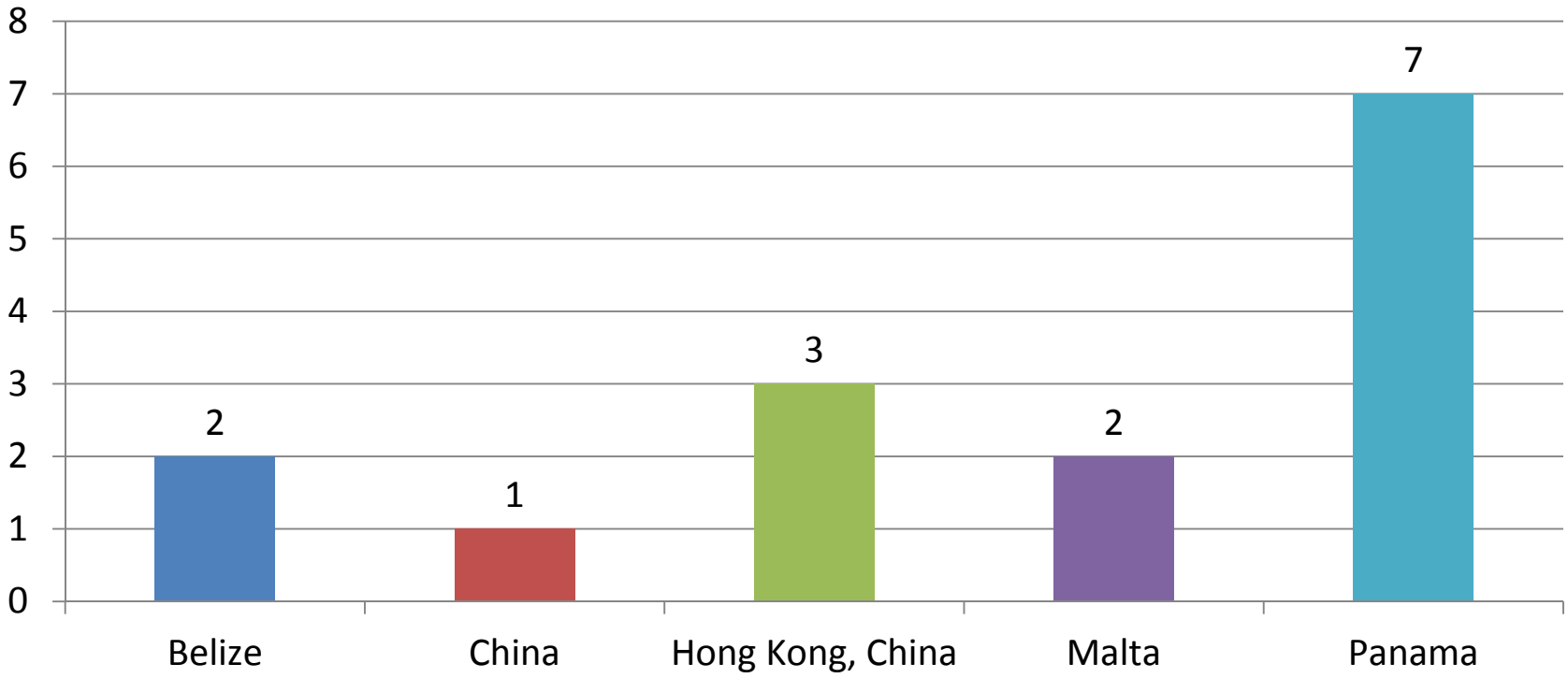
For the 15 CCS-classed ships that received detention report and carried out investigation, 25 detention deficiencies were detected, with the average of 1.67 deficiencies per detained ship, which witnessed a decline compared to the average of 2.61 deficiencies per detained ship in 2016.



Detention deficiencies were mostly regarding fire safety, ISM, life-saving equipment, and pollution prevention, etc.

I. General Status of PSC Inspections of CCS Ships in 2017

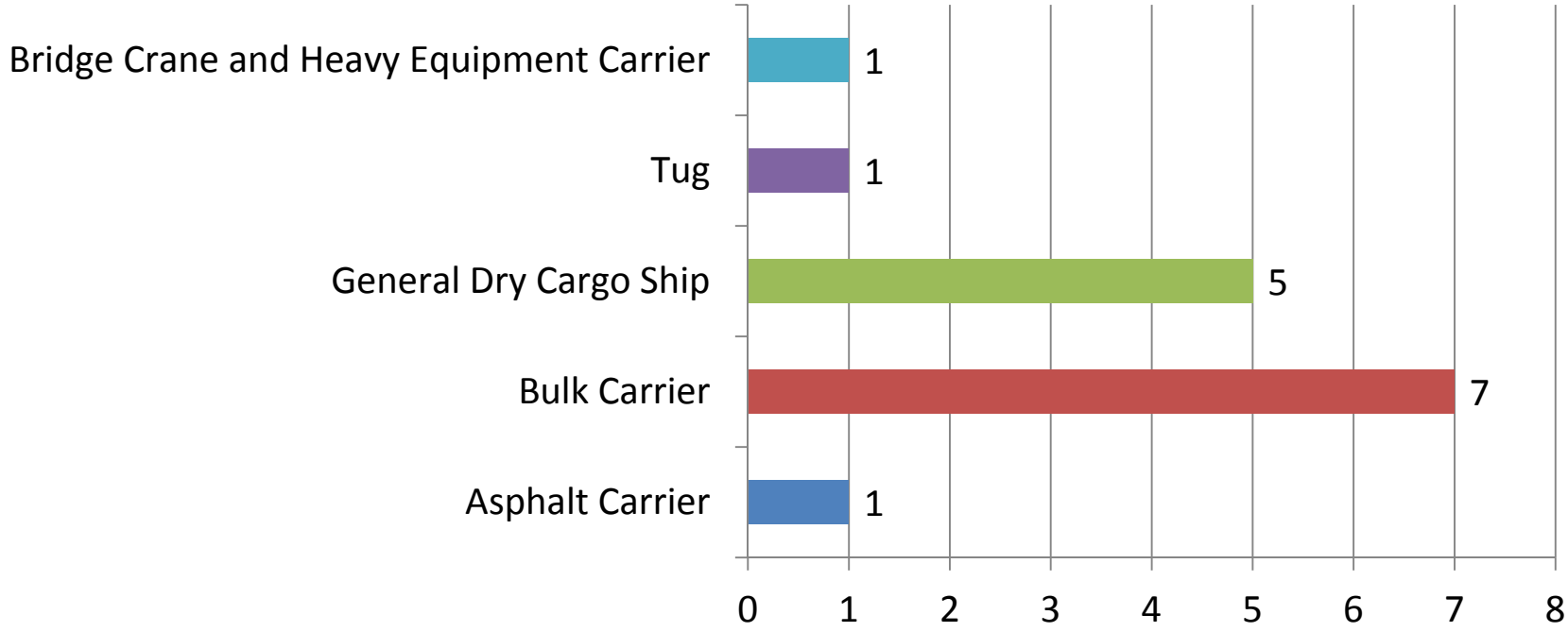
4. Distribution of detained ships by flags



Detained ships include more Panama and Hong Kong ships; among CCS ships, Malta and Belize ships bore a higher detention rate.

I. General Status of PSC Inspections of CCS Ships in 2017

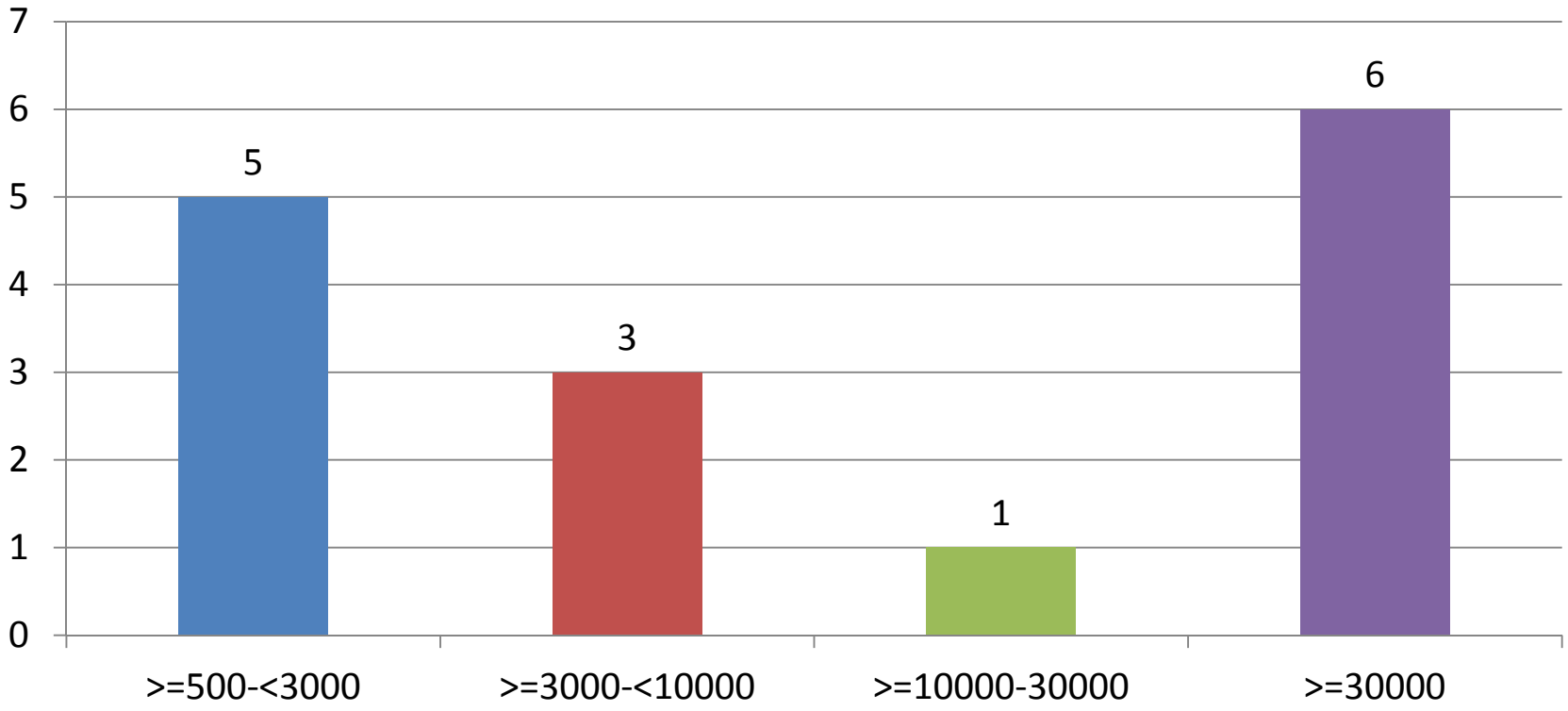
5. Distribution of detained ships by ship's types



There are more bulk carriers and general dry cargo ships among detianed ships, occupied 47% and 33% of all detained ships respectively, and 80% altogether.

I. General Status of PSC Inspections of CCS Ships in 2017

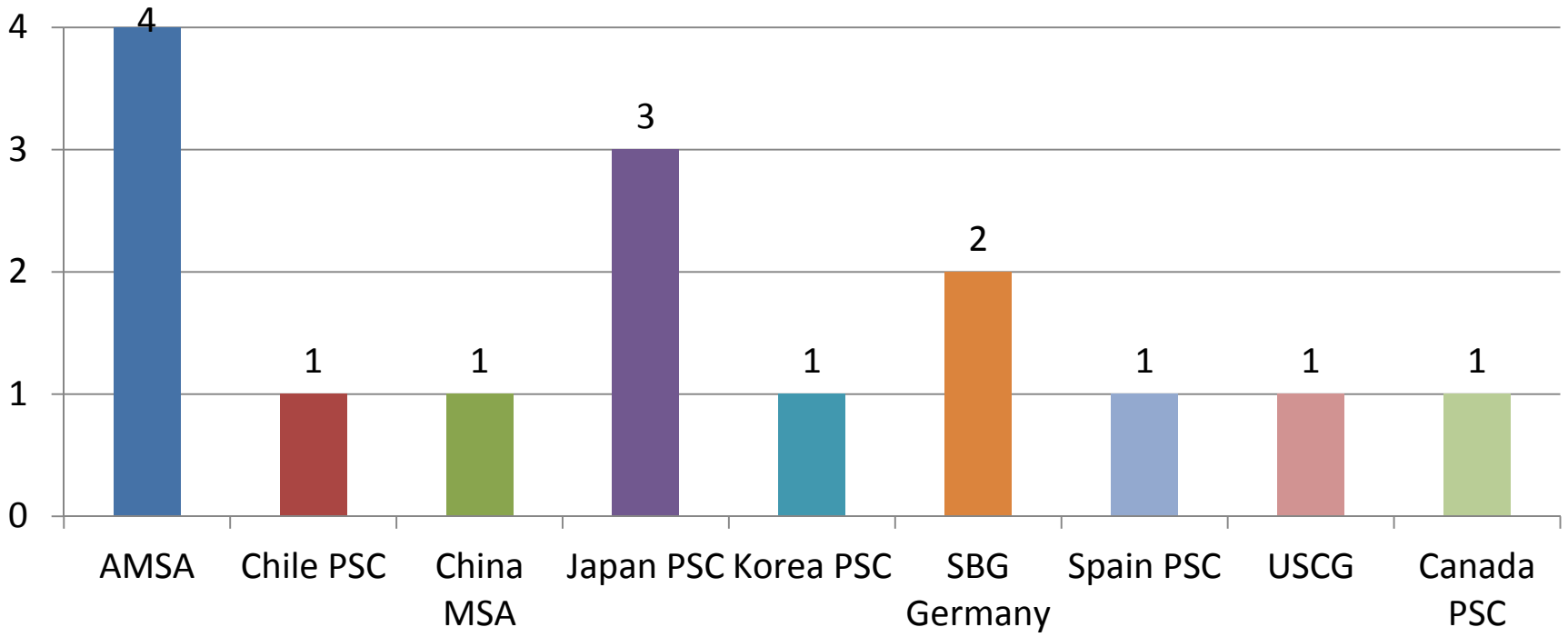
6. Statistics of detained ships by gross tonnage



Ships of less than 10,000 GT faced with more detentions, which occupied 53.33% of all detentions and were mainly small- and medium-sized general dry bulk carriers and tugs.

I. General Status of PSC Inspections of CCS Ships in 2017

7. Distribution of detentions by country/region



More detentions occurred in Australia, Japan, and Germany, which occupied 60% of total detentions of CCS ships.

II. Case study on typical detentions in the second half of 2017

Jul. 10, 2017 – Spain

Deficiencies for detention: ISM additional review shall be carried out before ship's departure, and the spotted ISM-related deficiencies were regarded as poor implementation of ISM management system.

ISM-related deficiencies: the ship was detected with more than 20 deficiencies, most of which were regarded as ISM-related by PSCO.

Investigation:

- The detention was faced with huge amount of ISM management deficiencies, which are mainly due to the crew's lack of maintenance to the equipment, and serious discrepency between system and implementation regarding SMS operation.
- Crews did not pay much attention to the port state inspection, and did not earnestly carry out the inspection before port arrival.
- Insufficient shore-based support form and management of the company.

Lessons to be learned:

- There was not enough attention paid to PSC inspection in Europe and lack of experience. Master and ship side was already reminded of the PSC inspection by the company before port arrival, but the Master was busy with supplies handling and did not fully prepare for the inspection.
- The other 8 ships under company's management revealed fine results of PSC and FSC inspections carried out at other regions, which led to loose management and insufficient monitoring, and caused the belated and ineffective supervision work.
- Master and most of the deck crew were foreign seafarers, and the crew of engine deparment were Chinese. Therefore the difficulty to onboard communication led to the crew's partial understanding of the company's orders.

II. Case study on typical detentions in the second half of 2017

Jul. 10, 2017 – Spain (continued)

Corroded and holed air pipes

Wet and slippery deck due to oil leakage

Small hatch cover cannot be closed

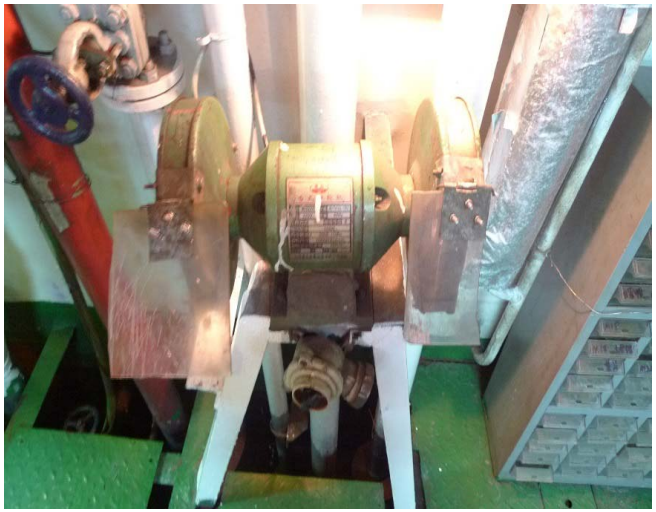
Insufficient pressure of air receiver of fire-control equipment

II. Case study on typical detentions in the second half of 2017

Jul. 10, 2017 – Spain (continued)

Broken tap of the hand washing sink

Toilet flushing doesn't work



Outer guard of abrasive wheel lost

Broken signal lights

II. Case study on typical detentions in the second half of 2017

Case 2: Aug. 18, 2017 – Australia

Deficiencies for detention: Fire damper of all ventilating fans (4 in total) in the engine room cannot be closed from outside.

Non-detention deficiencies: Close to 30 deficiencies were found such as damaged fire detecting system; lost of fire gate rubber; invalid automatic closing device of fire gate; remained open status of the fire gate by fixing steel wires behind; severe oil leakage of the auxiliary engine; place shifted of the paint room's fire extinguisher from original place to inside of the room; swelled fire pipe with leaking joints; leaking joints between fire hydrant and hose; testing operation of rescue boats on water surface was not conducted within 3 months; more than 2 months of the interval of exercise on enclosed space and emergency rescue; crews were not familiar with the operations of rescue boats' releasing arm.; part of the crews could not smoothly operate ECDIS; open status of man hold cover of the chain locker; oil leakage of the hydralic pipes when open the hatch cover; automatic closing device of the oil tank sounding hole was tied up with wires and remained open; parameters regarding combustion system of those of spares needed for main engine and auxiliary engine's daily maintenance/replacement and adjustment were not recorded into the *Parameter Record Book* as required by NOx Code; washing machines were connected by normal power strips; poor condition inside the restrooms; part of taps/water in vegetable basins were dirty, etc.

Cause analysis: Lack of enough maintenance to the ship, insufficient implementation of MLC principles, and bad working/living habit maintained by the crews.

Lessons to be learned:

- Pay attention to inspections and tests on ventilating pipes of the ship, and make sure of their sound condition;
- AMSA conducts extremely detailed and strict inspection on crew's living facilities and often propose MLC-related deficiencies; if faced with large number of deficiencies, the ship would be detained due to unsatisfactory ISM.
- Strength the training and education on crews, and give up the unhealthy living/working habit.

II. Case study on typical detentions in the second half of 2017

Aug. 18, 2017 – Australia (continued)

Fire damper of the engine room's ventilating pipe could not be closed

Wrong alarm released by smoke detector and alarm system

Rubber of the fire gate on deck lost

Fire gate could not be completely closed by automatic closing device

II. Case study on typical detentions in the second half of 2017

Aug. 18, 2017 – Australia (continued)

Severe oil leakage of auxiliary engine

Swelling fire pipe and leaked joints

Automatic closing device of oil tank's sounding hold was tightened by steel wires and remained open

Washing machines were connected by normal power strips

II. Case study on typical detentions in the second half of 2017

Aug. 18, 2017 – Australia (continued)

Dirty water from part of taps/in washing basins

Poor sanitary condition inside restrooms

Lamp inside the restroom is broken, with lost lampshade

Fire extinguisher was moved inside the paint room (rectified)

II. Case study on typical detentions in the second half of 2017

Case 3: Aug. 24, 2017 – Germany

Deficiencies for detention: 1. Part of the cable onboard suffered from unsafe connections; 2. sewage flew from infirmary, kitchen, and empty hold; 3. insufficient firemen's equipment in the center storage room, and unavailable promptly due to poor storage; 4. poor condition of part of the ventilating fire damper of cargo holds, bolts could hardly/not moved, and almost impossible for one crew to open the fire damper in the deck store room; 5. the hose of portable extinguisher on deck is deficient; 6. the guard rail of part of the holds were missing or broken; 7. competent authority carried out safety management inspection before ship's departure, and the remarked ISM deficiency indicates invalid ISM Code; 8. fly wheel protection of all auxiliary engines were missing.

Cause analysis:

German Marine Police attended onboard for pollution prevention inspection, and found the sanitary sewage sample appeared yellowish and suspected the abnormal fuctioning of sanitary sewage disposal equipment, and reported to PSCO, which led to a detailed inspection on ship by PSCO, who listed 19 deficiencies, including 8 deficiencies for detention. Reviewing the deficiencies, it indicated a strict control on pollution prevention form European PSCO, who takes samples of every ship's fuel and sanitary sewage for lab tests, and any problems leads to detention or fine. In addition, requirements on ship's maitenance and MLC implementation is also strict, and more deficiencies would als o lead to unqualified ISM and cause detention.

Lessons to be learned:

Measures to effectively avoid ship's deficiencies and detention include: Guarantee normal working condition of pollution prevention equipment, and operate according to the low sulphur oil conversion procedures strictly; strengthen the maintenance to ship's equipment, strictly follow the requirements of MLC convention; assure ship crew's working and living condition, as well as other treatment.

II. Case study on typical detentions in the second half of 2017

Aug. 24, 2017 – Germany (continued)

Blurry loadline marks

Terminal box of mast light was fixed to the max using lashing band; broken cable

Water from taps appeared color of yellow rust

Ventilation covers at holds' two sides cannot be closed

II. Case study on typical detentions in the second half of 2017

Aug. 24, 2017 – Germany (continued)

Separate storage of fire axe and other fire equipment, which affects the actual use

Rated load not marked on bollard (rectified)

Rubber hose of fire extinguisher deteriorated and cracked open

Leakage of main deck's hydraulic valve

II. Case study on typical detentions in the second half of 2017

Case 4: Sep. 21, 2017 – Japan

Deficiencies for detention: ineffective oil water separator

Cause analysis:

During the voyage that the oil water separator was used to dispose the bilge in slop/bilge tanks, the engineer on watch did not noticed that after a while, the bilge level was too low that large amount of dirty oil and bilge with high oil density entered into the oil water saparator, which caused the severe pollution of filter catrige, coarse filter of primary separator, and filter element of second-stage separator; crews did not clean and maintain the separator after, which caused the oil water separater out of operation. When the PSCO carried inspection, large amount of oil stain were found in the bilge sample, and was determined deficiency for detention.

Lessons to be learned:

All countries demonstrate serious attention on pollution prevention, and implement strict punishment. When the ship is using oil water separator to drain the bilge and dirty oil, close attention on bilge level and contained oil quantity shall be paid. Therefore can avoid water with obvious amount of oil sucked into oil water separator and clotted the filter and contaminate equipment and pipes. In addition, dismantlement to the oil water separator shall be carried out often, with inside parts and relative pipes cleaned; filter element shall be replaced in time as well.

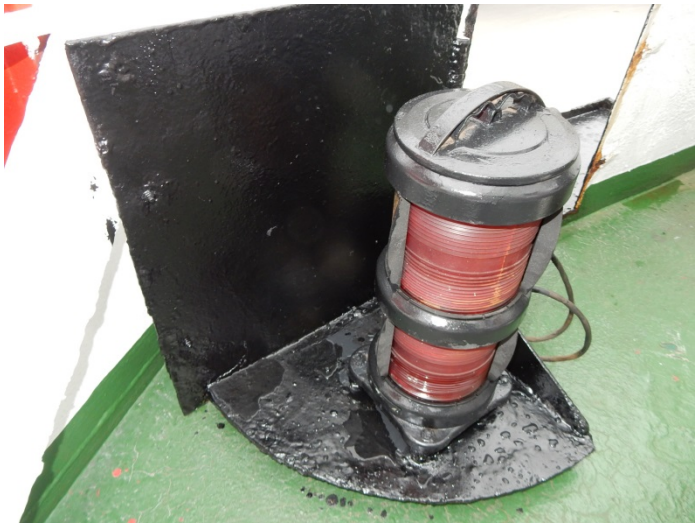
II. Case study on typical detentions in the second half of 2017

Sep. 21, 2017 – Japan (continued)

Sever pollution on filter element

Severe pollution inside oil water separator

Small hatches of cargo holds unable to close



Back plate of side light was not painted with black matte (rectified)

II. Case study on typical detentions in the second half of 2017

Case 5: Nov. 3, 2017 – Jiaxing, P. R. China

Deficiencies for detention:

1. Fuel stop valve of auxiliary engine was too close to generator and diesel engine;
2. Port side lifeboat had not been operated in water since April;
3. Safety committee was not established onboard;
4. Emergency stop of the main engine at bridge and in engine control room ineffective.

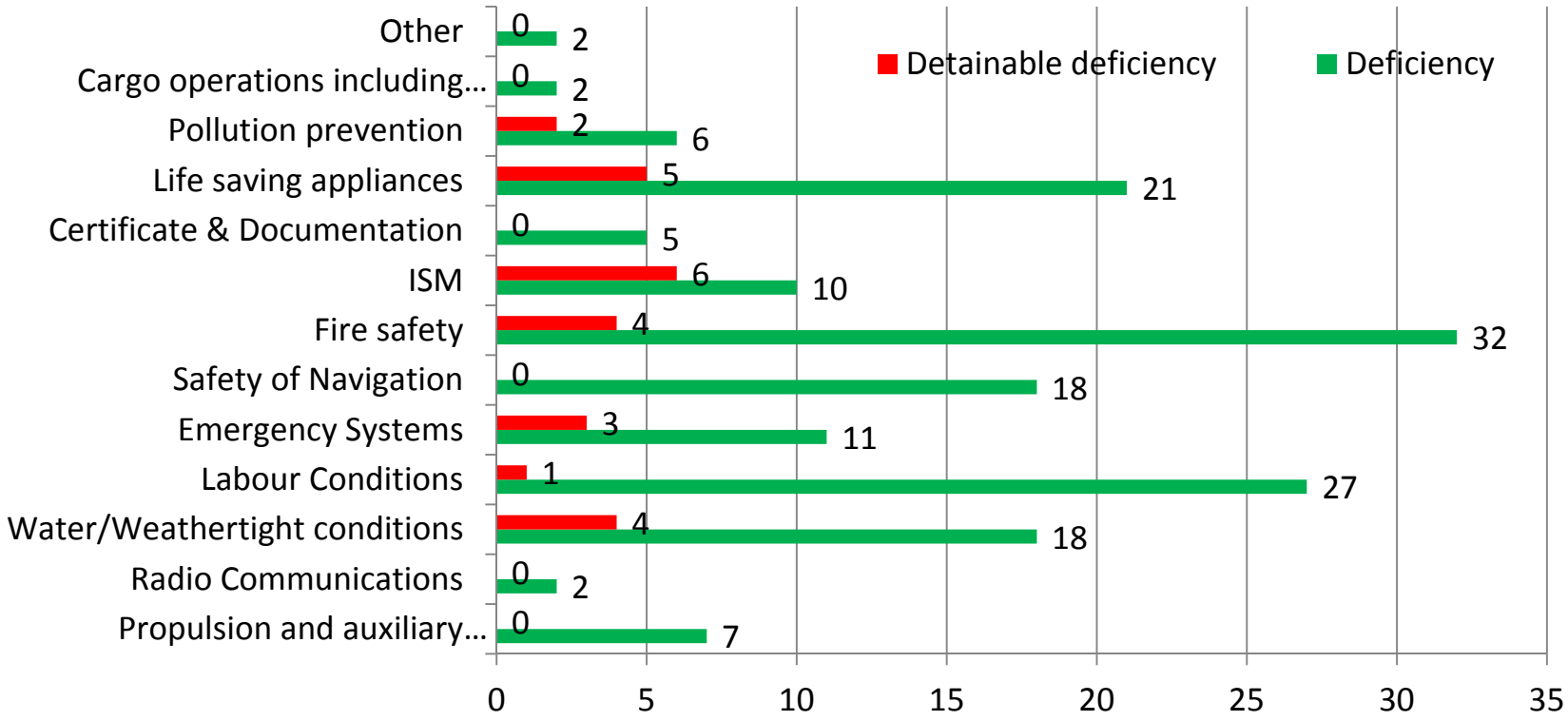
Investigation:

1. Fuel stop valve of the auxiliary engine is under pneumatic remote control, and located further than 5m from generator and diesel engine, which met the standard;
2. Crews did not record ship abandonment drill and water operation of lifeboat according to convention;
3. Ship did not carry out safety meeting and recorded according to MLC requirements;
4. Emergency engine stop test met with requirements; but the crew's unskilled operation led to PSCO's thinking that equipment did not function well.

Lessons to be learned:

1. Strengthen onboard training of crews, make sure they are familiar with the equipment, can accurately operate or explain to the PSCO, to avoid misunderstanding from PSCO and detention.
2. Strictly follow the requirements of MLC on drills, and record actual drill process in log book or drill recording notes, better with photos attached;
3. Strictly obey the MLC requirements. With PSCO's increasing interference on MLC inspection, all companies shall strengthen the supervision and inspection on MLC relevant items to avoid deficiencies and detention.

Key points of AMSA and PSC inspections

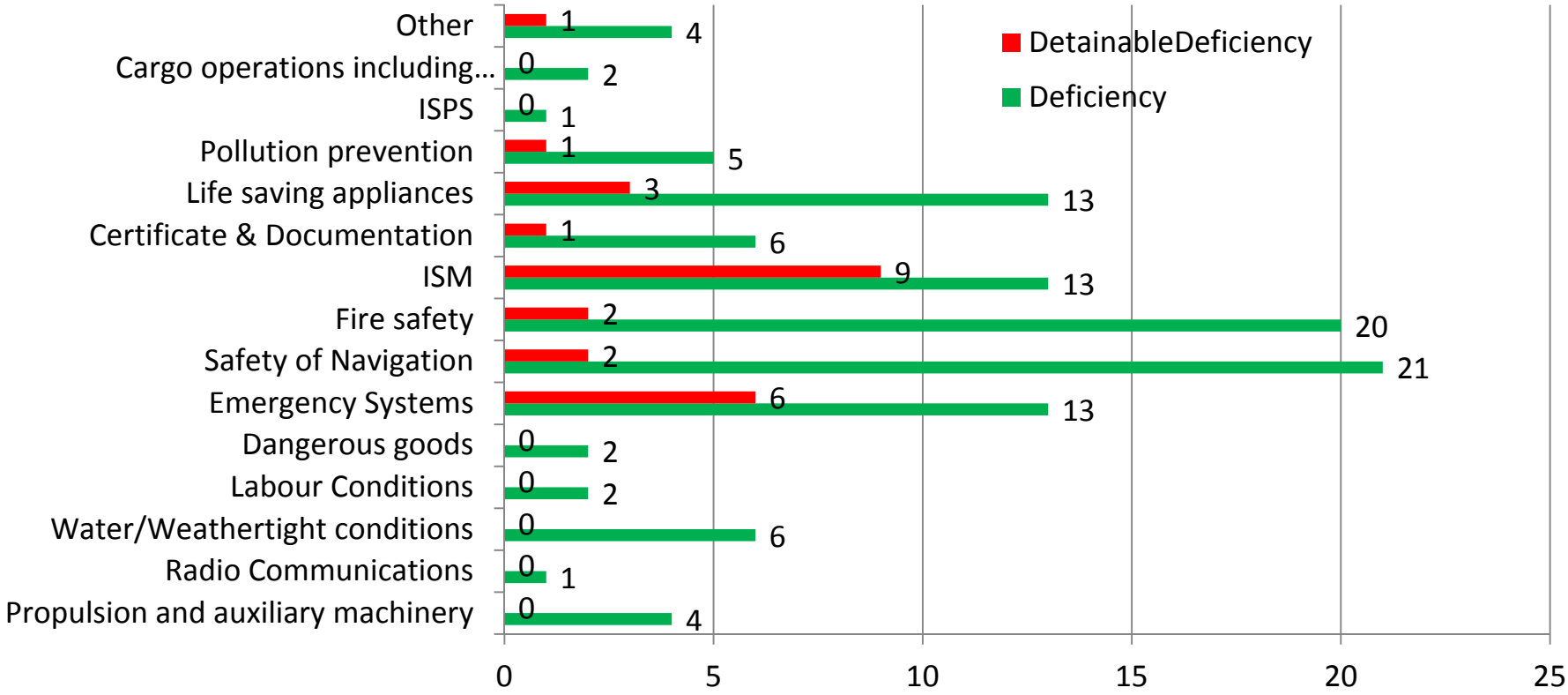


AMSA is famous of being strict. In recent 3 years, AMSA detected deficiencies mainly covered fire safety, labor condition, life-saving equipment, navigation safety, and wind/water tight, etc.; deficiencies for detention are mainly ISM, life-saving equipment, wind/water tight, fire safety, and emergency system, etc; ISM detention deficiencies are mainly due to poor ship's operation, drills and training, MLC deficiencies, repair and maintenance, etc.

Key points of AMSA and PSC inspections (continued)

- Lifeboat deficiency has always been AMSA's focus, and quite number of ships were detained each year due to this issue. Main problems include: lifeboat winch couldn't get started, on-load release was not restored, releasing and safety protective cable damaged, lifeboat rudder couldn't operate, and corroded and damaged lifeboat hood, etc.
- Emergency generator: must carry out tests on automatic starting and load; test operation shall be conducted for long time span to make sure the generator reliable; keep the ventilation inside emergency generator room in good condition.
- AMSA had strengthened inspections on equipment of ship's sea chart, including ECDIS, training on crew's qualifications, ECDIS operation, update of ECDIS, and the making and implementation of navigation plan; the inspection requirements on records of crew's working and rest time is also strict, and inspection is taken by comparing various records.
- AMSA inspections on cargo hold hatch covers and ventilation and air pipes are hard as well; whenever suspected, deficiencies may lead to detention, and open-up inspection would be required to eliminate deficiencies on-site.
- AMSA inspections on oil water separator and bilge disposal device are really careful; sometimes they require the disposal tank be opened for inside inspection, and all abnormal function would lead to deficiencies of detention.
- AMSA inspections on MLC convention is faced with increasing strictness; some ships were detained due to deficiencies regarding unqualified working/living condition, food supply, environmental sanitation, living equipment, etc.
- If more deficiencies regarding ship's maneuvering, MLC deficiencies, repair and maintenance, AMSA would propose ISM detention deficiencies and require RO to carry out extra review before ship's departure.
- If ship is detained at Australian water, AMSA would force the ship to stop cargo loading/discharging and use the engine; if faced with poor ship condition or numbers of detention, the ship would be refused to enter the port.

Key points of PSC inspections in Japan:

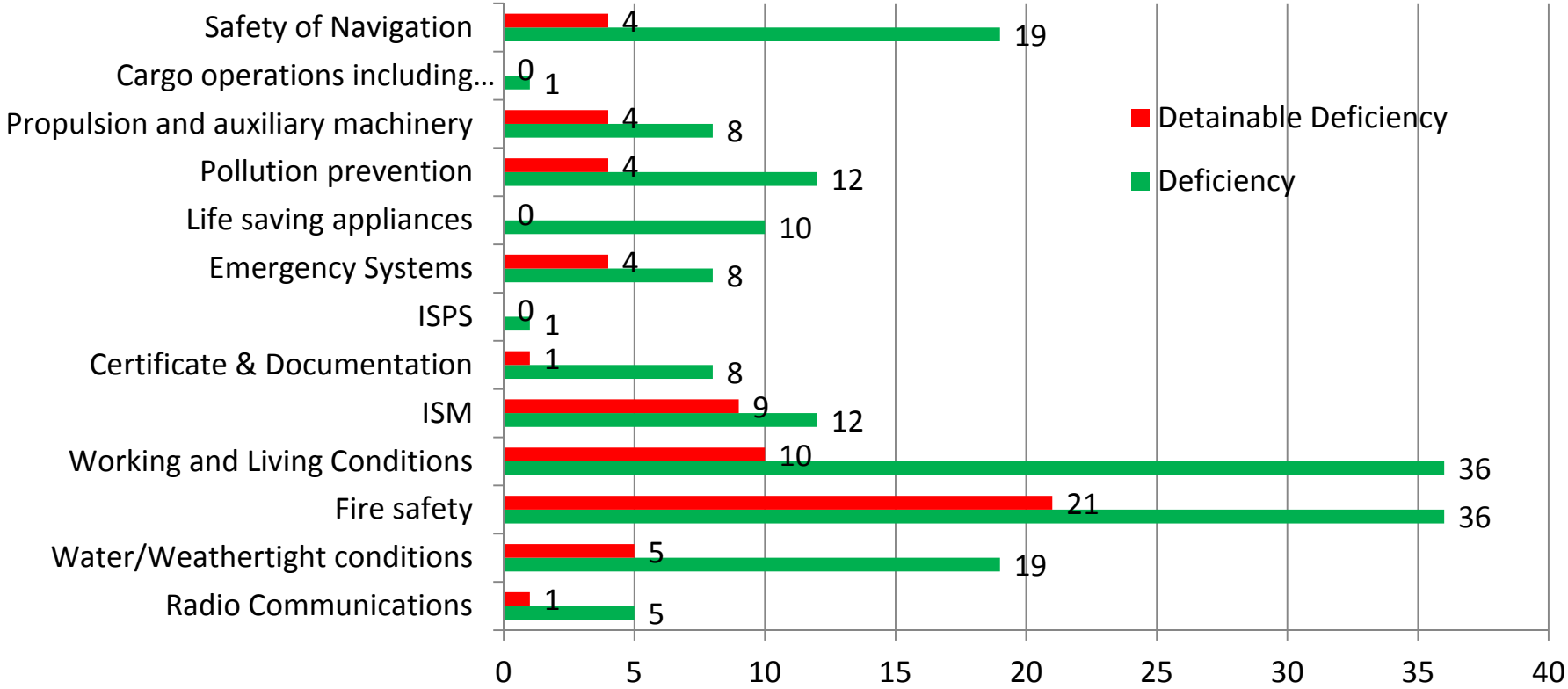


During recent 3 years, PSC detected deficiencies in Japan mainly covers navigation safety, fire safety, life-saving equipment, emergency system and ISM, etc.; detention deficiencies mainly include ISM, emergency system, life-saving equipment, fire safety and navigation safety, etc.; ISM detention deficiencies were mainly due to insufficient drills on fire-control and ship abandonment, senior crews' unfamiliarity with responsibilities during drills, and insufficient information of Japanese ECDIS, etc.

Key points of PSC inspections in Japan:

- Japanese PSC, especially at central area around Nagoya, demonstrates severe inspections on fire-control and drills of man-over-board rescue. Large number of ships were detained due to various insufficiencies during drill which led to the PSCO's thinking that the ships lack emergency preparation.
- Any failure of drills to meet requirements of PSCO would come down to insufficient training to senior crews, and their unfamiliarity with their own responsibilities, which leads to the proposal of ISM detention deficiencies, and require the RO to carry out extra review.
- Detention caused by drill failure would require onboard intensive training to crews conducted by professional staff hired locally by the company, which would cause huge amount of economic loss and delay of ship's schedule.
- Not few ships were proposed with deficiencies and faced with detention due to unfamiliarity with Japanese PSC's requirements on ECDIS. Japanese PSC requires ships to possess Japanese large-scale sea chart, Japanese chart catalog, Japanese water light and shape, etc. Relevant shipping companies must pay close attention on these specific requirements.
- Certain ships were found with deficiencies by Japanese PSCO due to gaps which pervious to light between fire gate frame and bulkhead. Pls. make sure the crews pay attention to inspection on thermal insulation material of the fire gate in emergency escaping route especially during dock repair; repair should be arranged immediately once such issues spotted.
- Extremely careful inspection on oil water separator, and occasionally requires open-up inspection inside the disposal tank. Once overmuch oil dirt found inside or on relevant pipes, they would judge the device ineffective and propose detention deficiency.
- Some ships received deficiencies proposed by Japanese PSCO due to missing cargo information onboard. All shipping companies must pay attention to this issue and remind the crews to obtain cargo information intime.

Key points of PSC inspections in Europe:



European PSC is also famous of being strict and noted with high rate of detention deficiencies. Once ships are found with deficiencies, detention is very likely to happen. In recent 3 years, AMSA detected deficiencies mainly are fire safety, working/living condition, navigation safety, life-saving equipment, wind/water tight, ISM, and pollution prevention, etc.; detention deficiencies mainly are fire safety, working/living condition, ISM, and wind/water tight, etc.; IMS detention deficiencies are mainly due to insufficient of ship's maintenance and drills; most of the detention deficiencies regarding working/living condition are due to ineffective MLC implementation, poor living facilities, insufficient food supply and no guarantee of crew's safety.

Key points of PSC inspections in Europe (continued):

- MLC is the key point of European PSC inspection. They would make sure that living facilities especially sanitary facilities are under good condition, living area and holds are kept clean, food well supplied, and a guarantee of crews' working and living safety. All severe MLC deficiencies lead to detention, even caused the ship's SMS to be announced invalid and receive ISM detention deficiency.
- In Europe, detentions caused by deficiencies regarding fire-control and ship abandonment drills often happen. Therefore ships sails to Europe shall strengthen training and practice of drills, make sure the crews are familiar with their responsibilities, and can operate emergency equipment smoothly.
- Leakage of oil, water, gas of any equipment may lead to detention. Therefore maintenance shall be sufficiently done to make sure the equipment work under good condition; leakage of equipment shall be dealt with immediately; ship and equipment shall be kept clean. Deficiencies regarding maintenance often link with ISM (1 ISM deficiency = 5 technical deficiencies), and cause large increasing number of detained ships, which increase the possibility of companies and ships' being evaluated as high risk.
- Fire equipment: shall make sure the ventilator, fire gate, air pipes, fire detective system work under good condition.
- Pollution prevention: Specialized water police at all European ports would attend onboard for pollution prevention inspection, and would all take samples of fuel and bilge for lab test; once problems detected, PSCO would be informed for detailed inspection onboard, which is very likely to cause detention. Therefore, ship shall make sure of good working condition of oil water separator and sewerage disposal device, and proper way of classifying trash; also strictly follow the requirements to converse to low sulphur oil and accurately record.

IV. Work recommendations on precaution of PSC detentions

- Good style of the ship would provide PSCO with fine first impression, and accordingly decrease the rise of being detained. According to the deficiencies summarized in whole year, most of them relates to MLC deficiencies, mainly expressed in poor sanitary condition, damaged living facilities, existing dangers in working environment, and insufficient treatment to crews; these issues always link to SMS, which leads to PSCO's thinking that the ship's safety management is not qualified and proposal of detention, especially ships sailing Australia, Europe, and America. We suggest all companies and ships strengthen crews' passion for work, conduct good ship's maintenance, keep crews' working/living equipment intact, to decrease deficiencies and detentions regarding MLC convention.
- Distribute crews' salary on time. Some companies suffered from poor operation status in current situation of marine industry, but once salaries are not distributed on time and port state receive the complaint regarding crews' payment, detention is doomed to happen. This would trigger even more severe and worse influence on the company. Therefore all companies shall pay close attention on crews' payment and make sure of crews' actual rights.
- Deficiencies and detentions proposed by PSC to some ships due to crews' unhealthy living/working habit, e.g. fire gate fixed open, sounding hole of tank remained open, automatic closing valve could not be closed, scattered around oil-contaminated waste and trash, connect electric wires without authorization, did not use onboard electrical equipment, switch button of emergency equipment were not set for automatic, and overboard valve of seweage did not closed, etc. We suggest all companies strengthen propaganda on crews' developing better working/living habit in order to decrease relevant deficiencies and detention.

IV. Work recommendations on precaution of PSC detentions

- Currently specialized organizations and personnel at EU would take samples of fuel or seweage onboard for lab test; once problems or suspicions aroused, PSC would receive feedback and dispatch personnel to carry out detailed inspection on ships. Normally, ships would be detained or faced with huge amount of fine and legal punishment. Some ships were detained by PSC of members of Paris MOU. We hope relevant companies and ships shall pay attention to this issue and get fully prepared.
- From Sep. to Nov. in 2018, Tokyo and Paris MOU and other PSC organizations would jointly carry out CIC delivered in supplementary provision VI (air pollution prevention) of MARPOL convention. We suggest companies prepare in advance, make sure ship's every fuel-consuming equipment such as diesel engine, boiler, and incinerator work under good condition, certificates, documents and records are complete and intact (EIAPP certificate, technical documents, parameters record, ozone-consuming material record, maintenance record, fuel conversion procedure and log book, operation manual for incinerator and record of crews' training and operation, working log of incinerator, VOC management plan (liquid cargo carrier) etc.), intact storage of bunker invoice and make sure the sulphur quantity meets the requirement of convention or local restriction, and crews' familiarity with operating incinerator, etc.
- Part of ship's deficiencies revealed undemanding implementation of inspection requirement of certain suppliers and service/test personnel. We suggest companies strengthen supervision on suppliers to avoid insufficient testing, cheating on workmanship and material, deceitful and dishonest behaviors, unrestored equipment after test or installation error, and half-heartedly issued report, etc. Crews can learn relevant operation while conduct supervision. If companies find deficiencies of suppliers, pls. report to CCS in time.

IV. Work recommendations on precaution of PSC detentions

- There are more deficiencies and detention caused by problems of vital equipment, mainly include deficiencies regarding lifeboat, emergency engine, ventilator, air pipes, cargo hold hatch covers, navigation safety equipment, and pollution prevention equipment. Some ships' crews were unfamiliar with relevant operation or revealed slow pace of operation, which led to PSCO's thinking that the equipment might be damaged, insufficient training received by crews, unqualified ISM and the proposal of detention. We suggest the crews strengthen the inspection and test on important equipment, expertly operate and use ship's key/emergency equipment.
- Repeated deficiencies detected during PSC inspection deserve much attention. Certain ship encountered repeated type of deficiencies on the same equipment during two PSC inspections with a close interval. Such situation may not only cause ISM deficiency, but also may implant the PSC inspector with suspicion that the company has a questionable operation system, and may lead to detention. Therefore, apart from targeted solution to the problems found during port state inspection, companies shall also learn the lesson and apply to actual situation, properly enlarge the range for rechecking and rectification, in order to avoid same problems detected again in next PSC inspection.
- If encountered with night inspection/audit, the ship shall arrange crews' working/rest time according to actual situation, in order to meet relevant requirements; also conduct proper safety guarantee measures for the inspector/auditor to avoid safety accident.
- From Jan. 1, 2018, according to EU MRV regulations, ships over 5000GT and bares history of sailing EU countries shall possess *"Monitoring Plan"* reviewed and approved by verification authority. In order to prevent unnecessary troubles during inspection at European ports and meet with requirements, ships that have not submitted *"Monitoring Plan"* to verification authority for evaluation, please submit evaluation as soon as possible. For ships that have schedule of sailing to EU ports, *"Monitoring Plan"* can be proposed to our society in advance for evaluation, or submit within 2 months after the arrival at EU ports for the first time.

Thank you for your strong supports to CCS!

CCS Headquarters

Add: CCS Mansion, 9 Dongzhimen Nan Da Jie, Beijing， China

Tel: (010) 58112035

EMAIL: PSC@CCS.ORG.CN