## **Annual Report 2018**

## **Port State Inspections**



**INDIAN REGISTER OF SHIPPING** 

### **FOREWORD:**

Indian Register of Shipping (IRS) is glad to release the Annual Report on Port state control (PSC) inspections for the year 2018. This report summaries statistics and analysis on results of PSC inspections of vessels for which statutory certification was undertaken by IRS as the recognized organization.

Even though there was overall rise in number of inspections under various MOUs in 2018 compared to previous years; few companies performed well as noted from PSC inspections of their vessels with "Nil" deficiencies.

There were "Zero" detentions under USCG in the year 2018. Number of detentions under Indian Ocean MoU and Tokyo MoU continued to remain same as in year 2017. However rise in number of detentions under Paris MoU, Black sea MoU and Mediterranean MoU in year 2018 was the cause of concern.

Results of concentrated inspection campaigns held in year 2018 on MARPOL Annex VI and Auxiliary Machinery conducted by PSC MOUs including preparedness of vessels towards compliance to BWM convention showed satisfactory results.

### **PSC PERFORMANCE UNDER VARIOUS MOUS:**

Performance of IRS under Tokyo, Paris MOUs and under USCG is provided below:

BLOCK	PERFORMANCE	ZERO POINT	PERFORMANCE
YEARS	CATEGORY	CATEGORY	CATEGORY
	TOKYO MOU	USCG	PARIS MOU
2014-2016	HIGH	YES	MEDIUM
2015-2017	HIGH	YES	MEDIUM
2016-2018	HIGH	YES	MEDIUM

Performance of IRS continued to remain 'HIGH' under Tokyo MoU, 'Zero Point Category' with USCG for last three block year periods. Less number of inspections has been the major reason for IRS to remain consistently in 'Medium' category under Paris MoU.

### **DETENTIONS IN YEAR 2018:**

There were 19 detentions under various MOUs for classed vessels issued with statutory certificates by IRS is as detailed below:

PSC MOUs/Authorities	Number of Inspections (as published)	Total Number of Detentions	Attributed to RO responsibility
PARIS	77	6	3
ТОКҮО	84	5	0
INDIAN OCEAN	43	4	1
RIYADH	Not Published	2	0
BLACK SEA	28	1	0
MEDITERRANEAN	Not Published	1	0
TOTAL	-	19	4

Highest number detentions i.e. 6 numbers were recorded under Paris MOU followed by five detentions under Tokyo MOU. Indian Ocean MOU recorded four detentions while Riyadh MOU had two detentions. There was one detention each under Black sea and Mediterranean MOU.

Three detentions under Paris MOU and one detention under Indian Ocean MOU were attributed to RO responsibility.

### **PSC DETENTIONS CATEGORY WISE IN YEAR 2018:**

DETENTIONS SHIP TYPE WISE					
General Cargo Vessels   Bulk Carrier   Oil Tanker   Diving Support Vessel					
11	4	3	1	19	

DETENTIONS AGE WISE					TOTAL
>25 yrs					
10	6	0	3	0	19

DETENTIONS FLAG WISE					
India Panama Liberia Palau					
5	4	3	19		

MULTIPLE DETENTIONS OF VESSELS			
Detained 3 times in the			
year			
1 ship X 3 times =	1 ships X 2 times =	14 detentions	19
3 detentions	2 detentions		

General Cargo/ Dry Cargo vessels were the maximum to be detained based on ship type wise followed by Bulk Carriers. Maximum number of detentions involved ships of higher age group. Six detentions were recorded for ships in the age group of 15 to 25 years while 10 detentions were for ships of above 25 years of age. Maximum seven detentions were of ships registered in India; followed by 5 detentions of ships registered in Panama and 4 detentions of ships registered in Liberia.

One ship got detained 3 times while another ship was detained twice in the year 2018.

Apart from above, there were seven vessels detained in year 2018 for which IRS had issued only Class certificates and three vessels were issued with BWM Certificates along with Class certificates. Detainable deficiencies for these cases were pertaining to statutory items and none were related to Ballast Water Management System.

In one of the detention case for year 2018, vessel was neither issued with Class or Statutory certificate by IRS, but IRS had undertaken only ISM audit of the vessel. This detention and the identified deficiencies were not attributed to the RO issuing ISM certificate by PSC authority.

### **DETAILS OF PSC DETAINABLE DEFICIENCIES:**

Following is the list of detainable deficiencies recorded in year 2018. Description of detainable deficiencies with Thetis Code is tabled below:

<b>Deficiency Code</b>	Thetis Code	Details of Deficiency		
Certificate &	01136	International Water Ballast Management Certificate missing		
Documentation – Ship Certificates & Crew Certificates	01202	Crew have no valid certificate of proficiency and basic training certificate.		
Crew Certificates	01214	Endorsement by flag state for some crews not original.		
	01214	Officers flag endorsement missing.		
	01220	SEA of all crew members not as required – overtime and paid annual leave not mentioned.		
<b>Emergency System</b>	04102	Emergency fire pump found inoperative.		
	04103	Emergency generator not started during inspection.		
	04114	Emergency generator does not automatically start and connect to emergency switchboard		
	04114	No evidence from RO that Emergency DG out of order and new diesel generator has been installed on deck.		
	04118	Drill failed: the crew showed a lack of training, no breathing apparatus and no gas detector were used		
Fire Safety	07103	Newly installed cable penetrating from corridor to wheelhouse not provided with any cable penetration.		
	07105	Self-closing fire doors in accommodation fitted with unauthorized hold-back hook.		
	07106	Fire detection is indicating several faults in way of indication lights.		
	07106	Fire detection system found switched off upon arrival on board. After starting up, the system is showing faults: earth fault, mains charger fault, 24V battery fault.		
	07106	Found several smoke detectors of the fire detection system inoperative		

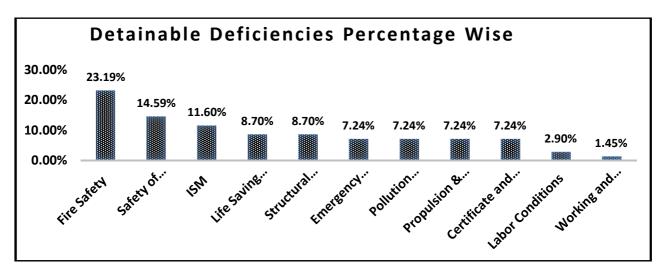
	07108	One 45 Kg fire extinguisher in engine room is found only partly filled, not properly secured and blocked by additional equipment.
	07109	CO2 pipes leading to cargo hold are broken.
	07109	Found fire line on main deck not properly fixed. Missing handle for valve on forecastle.
	07113	During testing the emergency fire pump, the main fire line cracked/holed.
	07113	Main fire pipe rusted seriously and found leaking on main deck.
	07126	Most parts of Engine room (Boiler, Aux. engines and Main engine) are oily and dirty (fire hazard).
	07126	Oil accumulation found in Engine room bilges. Auxiliary Engine platform and purifier platform, repeated deficiency of PSC.
	07199	Ventilation pipe for crankcase of starboard main engine has opening into engine room because of missing pipe.
	07199	The insulation at the exhaust pipe of the harbour engine forward found partly missing.
	18429	B-Class doors in corridor S/B accommodation removed and laundry machines installed in particular room. Not according safety plan which indicates a B-class wall.
	07116	Many holes found on coaming of E/R ventilator.
Structural Condition & Water/	02103	Last available stability calculation is from 2016, since then no proof that any calculation was done.
Weather tight conditions	02105	After tracking conversation between the ship and the company it found that out one of the rudder is missing, and the vessel representative admitted that the rudder is missing.
	02106	Crew confirmed cement box in aft bilge well and also noticed doubler welding in progress on underwater side shell in cargo hold. RO was not informed.
	02106	Vessel collided in port of Amsterdam, which caused considerable hull damage on the bow. Hole of approximately 40cm round in hull forecastle. It is unclear if there is more underwater damage.
	02134	Load line mark on PS not existing. Free board in reality are found different from freeboard mark in LL certificate.
	03104	Many hatch cleats are rusted and seized.
Safety of Navigation	10102	Both GPS are not of a type approved by the Administration. One device has only a manual in Norwegian language, which is not understood by the crew.
	10104	The gyro compass bearing repeater could not be shown.
	10105	The magnetic compass is not readable at the main steering position, the digital repeater is showing an error.

	10109	Fwd. emergency top light inoperative, several signal lights
		inoperative, Stbd side light cover damaged.
	10111	Found expired and not updated charts from last voyage and for
	10111	next.
	10114	The S-VDR of the vessel found malfunctioning. There was
	10114	alarm about dates lost and logging failed
	10114	The VDR display panel not working. Audible and visual alarm for power failure of SVDR out of order.
	10116	Paper editions of nautical publications are missing (only
	10110	electronic publications are provided but not approved
		according to the SEC).
	10116	Vessel shall have paper publications according to certificate,
		in reality electronic publications. ENPs for last voyage missing (Channel Pilot, Baltic Pilot).
	10127	Voyage plan insufficient: Only some waypoints included.
Life Savings	11101	Life boat Annual is overdue.
Appliances	11101	Life boat food rations are expired.
	11101	The lifeboat (mentioned in the safety equipment Form E as other lifeboat) could not be start. Also P/S L/B has a small hole.
	11116	Rocket parachutes are expired.
	11118	Life jackets partly are not suitable with the immersion suits on
		board. The suits do have gloves, which make it impossible to
	11107	make a knot in a rope. Life jackets are to be secured by rope.
	11127	Smoke signal are expired.
Propulsion and auxiliary machinery	13106	Insulation laggings found wetted with oil above Boiler. Incinerator, M/E and Aux. Engine surroundings damaged.
	14119	Oil leakage from Aux. Engine to be rectified and cleaned.
	14119	Heavy oil leakage observed from all main engine fuel pumps
	1.4110	and lube oil pump.
	14119	Oil leakage from M/E to be rectified. Bottom to be cleaned and made free from oil.
	14119	Oil leakage from purifiers to be rectified and made clean.
Working and Living Conditions	09232	Entire Engine room found oily from top to bottom. Floor plates found slippery.
MARPOL Annex I Annex VI	14104	Outlet pipe found to discharge overboard. Regarding the above deficiencies it is clear that there is negligence in safety and carelessness for Marine Environment.
	14104	Oily water separator out of order long time.
	14104	Oily water separator not working.
	14107	15 PPM discharge monitoring and control system defective.
	14402	Found blower on sewage plant not working for long time and
		as vessel do not have a sewage holding tank, the vessel is
		polluting the harbor area by untreated sewage.

ISM	15109	Based on the nature of deficiencies and repeated deficiencies
	13107	of last report it is observed that vessel is not maintained as per ISM Code.
	15150	Safety Management audit by the Administration is required before departure of the ship. Deficiency(s) marked ISM is objective evidence of a serious failure or lack of effectiveness of implementation of the ISM Code.
	15150	Safety Management audit by the Administration is required before departure of the ship. Deficiency(s) marked ISM is objective evidence of a serious failure or lack of effectiveness of implementation of the ISM Code.
	15150	Safety Management audit by the Administration is required before departure of the ship. Deficiency(s) marked ISM is objective evidence of a serious failure or lack of effectiveness of implementation of the ISM Code.
1515		Safety Management audit by the Administration is required before departure of the ship. Deficiency(s) marked ISM is objective evidence of a serious failure or lack of effectiveness of implementation of the ISM Code.
	15199	The SMS as implemented does not ensure effective maintenance of the vessel as evidenced by noted deficiencies and also does not ensure personnel are trained appropriately
	10136	The working language (English) is not understood by all crew.
	15199	The SMS does not ensure the vessel can (effectively) respond to hazards, accidents and emergency situations as evidenced by deficiencies. The SMS also does not ensure effective implementation of procedures and instructions for key shipboard operations concerning the safety of personnel, ship and environment.
Labour Conditions  – Conditions of employment, Health protection, medical care social	18204	Calculation and payment of wages not as required. Missing evidence of payment of overtime and paid annual leave; according to records of work and rest hours, most of the crew members work 12 hours per day but there is evidence only of the payment of the basic monthly wage on basis 8 hours per day and 48 hours per week according to SEA of all crew members.
	18401	Medical chest of vessel without medicine and equipment according to ILO.

**DETAINABLE DEFICIENCIES IN YEAR 2018: CATEGORY WISE** 

No.	Categories	No. of Detainable	% of Total
		Deficiencies	Deficiencies
01.	Fire Safety	16	23.19%
02.	Safety of Navigation	10	14.59%
03.	ISM	8	11.60%
04.	Life Saving Appliances	6	8.70%
05.	Structural Condition and Water/Weather	6	8.70%
	tight Conditions		
06.	Emergency Systems	5	7.24%
07.	Pollution Prevention	5	7.24%
08.	Propulsion and Auxiliary Machinery	5	7.24%
09.	Certificate and Documentation	5	7.24%
10.	Labor Conditions	2	2.90%
11.	Working and Living Conditions	1	1.45%
	Total	69	100.00%



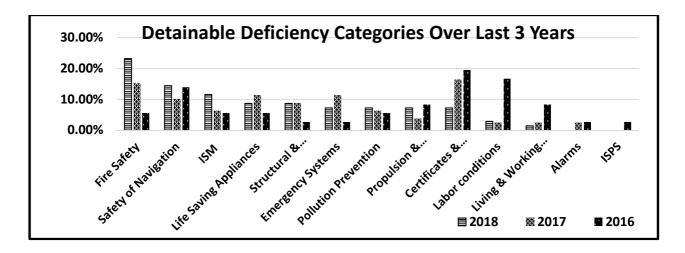
From the list of detainable deficiencies, following is inferred:

i. Maximum number of detainable deficiencies were recorded under "Fire safety" and were related to malfunctioning fire alarm/detention system, defective emergency fire pump/fire lines, fire doors, faulty ventilators for E/R and machinery spaces, CO2 system and fire risk posed due to oil accumulation.

- ii. Deficiencies pertaining to Safety of Navigation were next to deficiencies under fire safety by numbers. Navigational equipment, mainly VDR/S-VDR, Magnetic compass, Gyro were found defective or malfunctioning, nautical publications/charts and voyage plan found not updated or missing.
- iii. Seven of the total 19 detention cases pointed to lack of effective implementation of the ISM Code requiring additional ISM audit prior departure of the ship from the port of detention.
- iv. Many deficiencies were pertaining to Life Saving Appliances and routine inspections and testing of LSA found not done as required. Lifeboat/rescue boat including associated safety equipment were not maintained, food-ration, safety equipment inside lifeboat (buoyant signal/ rocket parachutes) found expired.
- v. Detainable deficiencies related to structural/ water-weather tight conditions included poorly maintained structures, fittings and failure to report structural damage or defective condition to Classification Society/Recognized Organization, Flag and PSC.
- vi. Oil leakages, oil mixture accumulation in machinery space, defective/nonoperational oily water separators along with defective sewage treatment plant found to be the cause of many detentions.
- vii. Deficiencies pertaining to upkeep of mandatory documents and certificates for vessel and crew had been one of the reasons accounted for detainable deficiencies.
- viii. Detainable deficiencies were recorded pertaining to MLC requirements such as payment of wages, medical chest without medicine/equipment.

### COMPARISON OF DETAINABLE DEFICIENCIES OVER LAST 3 YEARS

<b>Deficiency Category</b>	2018	2017	2016
Fire Safety	23.18%	15.18%	5.6%
Safety of Navigation	14.49%	10.13%	13.9%
ISM	11.59%	6.33%	5.6%
Life Saving Appliances	8.69%	11.39%	5.6%
Structural & Water/Weather tight Conditions	8.69%	8.87%	2.7%
Emergency Systems	7.24%	11.39%	2.7%
Pollution Prevention	7.24%	6.33%	5.6%
Propulsion & Machinery	7.24%	3.80%	8.3%
Certificates & Documentation	7.24%	16.45%	19.5%
Labor conditions	2.89%	2.53%	16.7%
Living & Working Conditions	1.44%	2.53%	8.3%
Alarms	0%	2.53%	2.7%
ISPS	0%	0%	2.7%



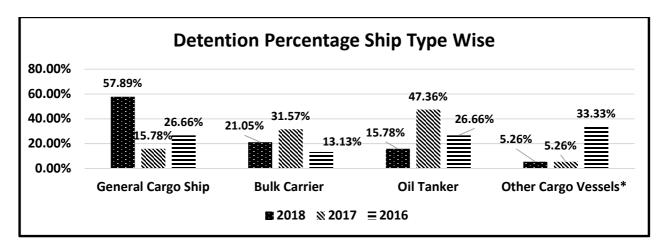
From above data it is evident that percentage of detainable deficiencies in areas related to Fire safety, Safety of navigation, ISM, Pollution prevention and Propulsion/Auxiliary machinery increased in 2018 compared to year 2017.

Deficiencies related to Life saving appliances, Emergency Systems, Certificate and documentation, Living and working conditions and compliance to ISPS requirements decreased in year 2018 compared to previous year.

### COMPARISON OF SHIP TYPE WISE DETENTION PERCENTAGE OVER LAST 3 YEARS:

Ship Type/ Years	2018	2017	2016
General Cargo Ship	57.89%	15.78%	26.66%
Bulk Carrier	21.05%	31.57%	13.13%
Oil Tanker	15.78%	47.36%	26.66%
Other Cargo Vessels*	5.26%	5.26%	33.33%

<sup>\*</sup>Other Cargo Vessels: Offshore Supply Vessel, Tug, Diving support vessel

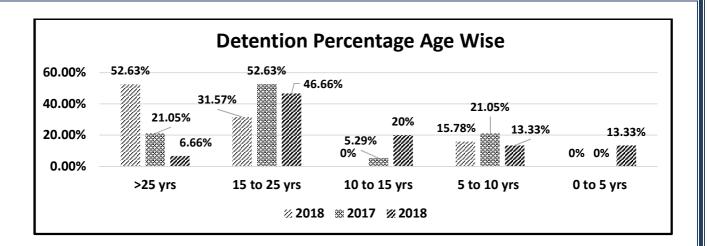


Considering ship type wise, number of General cargo vessels detained were the maximum in year 2018 compared to previous two years i.e. 2017 and 2016. Detention of these vessels were mostly under Paris, Black sea and Mediterranean MoU.

On contrary detentions of Bulk Carriers, Oil tankers and Other Cargo Vessels decreased compared to previous years.

# COMPARISON OF AGE WISE DETENTION PERCENTAGE OVER LAST 3 YEARS:

Age/ Years	2018	2017	2018
>25 yrs	52.63%	21.05%	6.66%
15 to 25 yrs	31.57%	52.63%	46.66%
10 to 15 yrs	0%	5.29%	20%
5 to 10 yrs	15.78%	21.05%	13.33%
0 to 5 yrs	0%	0%	13.33%



From age wise comparison of detentions in last 3 years, detentions of vessels of higher age group showed rising trend over years with significant increase in number of detentions for age group above 25 years.

#### **DEFICIENCIES OTHER THAN DETAINABLE DEFICIENCIES IN YEAR 2018:**

Deficiencies other than the detainable deficiencies are listed in Annex 1. These deficiencies have been categorized under various headings for ready reference.

Major category of these deficiencies were:

- i. Fire Safety equipment (fire door, fire alarm and detectors, fire hose/hydrant, fire pump, fire men outfit, fire damper etc. found defective or non-operational).
- ii. Life Saving Appliances (lifeboat, life-raft, rescue boat were found in poor condition or defective).
- iii. Safety of Navigation (SDVR, magnetic compass, navigational lights, Aldis lamp, communication equipment found malfunctioning/non-operational or navigation).
- iv. Structural and Water/Weather tight Conditions (deck areas, hull, hatch covers, engine room or steering gear platforms not maintained, damages not reported).
- v. Propulsion and Auxiliary machinery (leakages on machineries, non-functional or non-operational equipment, defective or malfunctioning safety systems or associated measuring devices).

- vi. Publication and charts (not updated or not provided onboard, not corrected timely or found incomplete).
- vii. Emergency systems (Emergency fire pumps/ lights/ generator or batteries not maintained or not operational, Emergency safety symbol/ signs not found in order).
- viii. Certificates and Documentation (endorsements issues, certificate in original not available or expired, contracts expired, records not updated or maintained).

Following table provides deficient equipment/item which accounted for large number of PSC deficiencies:

Year	Equipment or item which accounted for large number of PSC deficiencies (Listed in descending order based on number of deficiencies)							
2018	Fire detection System/ Firefighting equipment (Fire pump, extinguisher)	Navigation equipment (VDR/SVDR/ Magnetic Compass/Gyro)	Life Boat / Rescue Boat	Defective deck fittings	Oil leakages from machinery	Publications/ Charts		
2017	Life Boat / Rescue Boat	Lighting	Fire door	Publications/ Charts	Seafarer Employment Agreement	Defective deck fittings		
2016	Publications/ Charts	Life Boat	Expired Certificates	Defective deck fittings	Fire door	Crew Wages		

From above data it is evident that for year 2018 number of deficiencies related to emergency fire pump, navigation equipment, lifeboat/rescue boat, deck fitting and oil leakage from machineries, publication and charts were recorded.

### CAUSES ATTRIBUTING TO THE DETENTIONS:

1. Number of inspections under Paris, Black sea and Mediterranean MOU increased in 2018 and there was also rise in detentions under these MOUs. From the detention cases following can be summarized:

- (i) Increase in the number of general cargo vessels trading in regions covered under above MOUs was the main reason for increase in number of inspections.
- (ii) Higher age combined with grading of flag under Paris MOU were factors for few vessels being targeted.
- (iii) Vessels involved in 11 detention cases under Paris, Black Sea and Mediterranean MOUs were issued with statutory certificates either by the flag or other Recognized Organization and detainable deficiencies raised by PSC were pertaining to statutory items.
- (iv) Three different vessels were involved in grounding or collision and were detained under Paris MOU for the same reason.
- (v) Nature of deficiencies indicated that the overall upkeep of the vessels including onboard equipment/ documentation required attention and implementation of safety management systems required improvement.
- 2. Detentions within close proximity of survey/ISM audit in few cases including deficiencies attributed to RO responsibility indicated additional care required during survey/audits.
- 3. One of the vessel was detained thrice and two vessels were detained twice during the year 2018. Nature of recurring deficiencies and repeated detentions revealed that, these detentions were the result of lack of supervision, monitoring and ineffective corrective and preventive actions.
- 4. Other factors which could be attributed to the detentions were:
  - (a) Deficiencies pertaining to emergency fire pump/fire safety appliances, upkeep of navigation, life-saving appliances and pollution prevention equipment indicated lack of routine inspection, supervision and monitoring, regular testing, lack of preventive maintenance and timely corrective/ preventive

- actions. One typical deficiency reported by PSC was pertaining to non-compatible life jacket with the available type of immersion suit onboard, which highlighted lack of understanding of requirements.
- (b) Nautical publications/charts found not updated, voyage plans found deficient, crew certificates/ship certificates/documents found missing, indicating lapses in implementing shipboard procedures and inadequate monitoring.
- (c) Deficiencies related to structural items, water-weather tight conditions indicated lack of timely maintenance, repair and failure to report structural damage or defective condition to Classification Society/Recognized Organization, Flag and PSC.
- (d) Oil leakages, oil mixture accumulation in machinery space indicated lack of timely repairs, good housekeeping practices.
- (e) There were deviation from compliance to MLC requirements, working and living conditions were not maintained as required.
- (f) Safety management system was not implemented effectively leading to detainable deficiencies pointing to lack of effective implementation of the ISM Code was indicated in as many as 7 detention cases.

### **IMPROVEMENT ACTIONS:**

AA) Improvement action in respect of Survey and Audits:

- 1. Based on high number of detentions of high age group vessels under Paris, Black Sea and Mediterranean MOUs, vessels of higher age group considered requiring attention and kept under condition monitoring program so that additional care can be taken.
- 2. Fleet Monitoring Program has been modified taking input from the PSC detentions.

- 3. Periodical surveys and ISM audits considered requiring more focus on bringing out lapses in implementation of safety management system and surveyors/auditors have been advised on same.
- 4. PSC inspections/detentions for Classed vessels including where, statutory certificates were issued by Flag or other RO have been analyzed and lessons learnt along with the clarification on requirements were shared with surveyors through advisory. Additional checklist based on PSC deficiencies have been developed to assist surveyors during periodical surveys.

BB) Improvement action in respect of maintaining the vessel in compliance with Class and Statutory requirements by Company:

- 1. More efforts considered required from the Company to ensure vessels are maintained between surveys.
- 2. Vessels of higher age group considered required more attention in terms of planned maintenance of structure, machineries and equipment.
- 3. Awareness of crew required improvement regarding SMS procedures, safe practices, reporting requirements.
- 4. Readiness of firefighting, live saving, navigation, emergency and pollution prevention equipment required specific attention.
- 5. Reporting to Flag Administration, Classification Society/Recognized Organization and to the Port State Control required more attention.
- 6. Monitoring and supervision by Company required improvement through effective safety inspections, superintendent inspections, internal safety audits.

Based on analysis of detention/inspection, individual letters have been sent to the companies; where in areas requiring attention have been highlighted.

### **INITIATIVES BY IRS:**

In order to assist the Company and the ship staff, following initiatives have been taken by IRS which can be made use of:

- 1. IRS webpage provides comprehensive checklist for vessel owners and managers so that ship staff is made aware of the focus areas for smooth PSC inspections.
- 2. For guidance to vessel owners and managers, continuously updated list of deficiencies as well as company wise fleet performance is available on IRS Webpage.
- **3.** Analysis of the detention is provided to the owners and managers with the intention to avoid reoccurrence of similar lapses.
- **4.** IRS has implemented the fleet quality monitoring program with the aim of maintaining and improving the fleet quality thus reducing the chances of any detention.
- **5.** Effective implementation of Safety Management System on board during periodical survey is being verified in accordance with IACS PR 17.
- **6.** Upcoming concentrated inspection campaigns (CIC) by PSC MOUs are monitored and compliance of the same is verified on-board proactively.
- 7. Meets are arranged with surveyors and industry where information pertaining to guidance on latest rule, statutory requirements, lessons learnt from PSC inspections are shared from time to time.
- **8.** For vessels which are only issued with class certificates; owners are pursued to offer the vessels towards statutory survey/audits; so that better control can be exercised towards upkeep of vessels in terms of compliance to statutory requirements and to prevent detentions of the vessel.

### **CONCLUSION**

It has been the endeavor of Indian Register of Shipping to maintain its fleet in high standards. With proactive measures and active participation of owners and managers, it is possible to improve the PSC performance and achieve a target of "Zero PSC detention".