



**NMC 74**

**Bulk Carrier Ship Inspection**

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## INTRODUCTION



<http://www.thebalancecareers.com/>

**NAME / RANK / EXPERIENCE**

Expected learnings!

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- **Objectives of Training Course**
- Understanding and preparation for:
  - Rightship Vetting Inspection
  - Port State Control Inspection

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- Eliminating Vessel detentions / Serious observations.
- Implications of detention and reduction in rightship rating
- Follow up after Inspections

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## Why Inspections!!!



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## A brief History!

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**Sea as a mode of transport has its origins in the Stone ages.**



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**Concept of a flag state was originally used around 1000 BC by the Egyptians for Identification purposes.**



**The flag was a symbol of the nation!**

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**Assigning Flags gained importance as voyages were undertaken at greater distances from Home port...**



... and slowly spread to other countries.

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**As shipping advanced, the need of flag state was felt for the following reasons:**



- The Legal regime on the vessel – Who governs the activities on the ship?
- Is it being used for piracy, etc?
- Maintenance of public order

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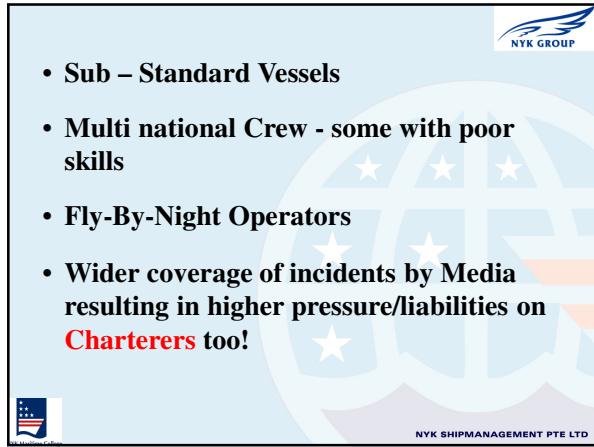
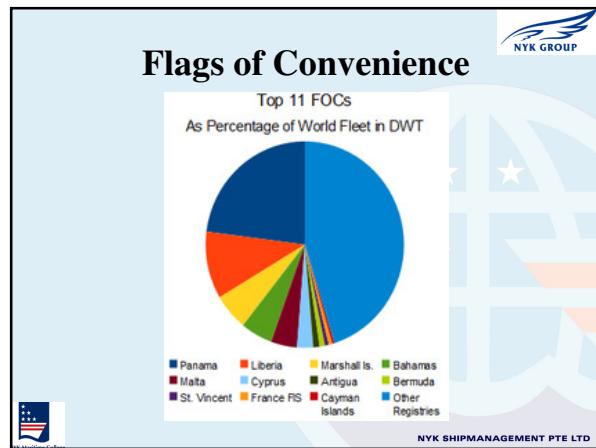
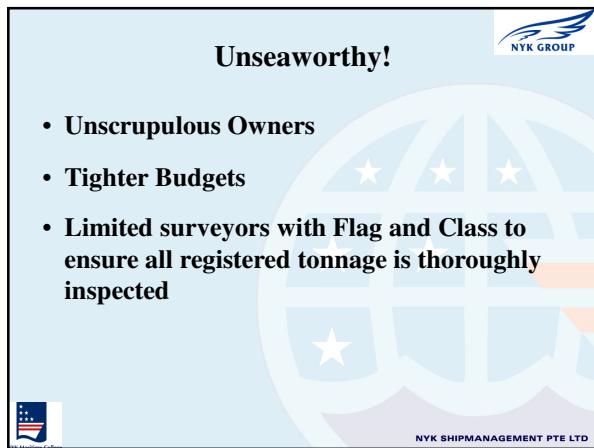
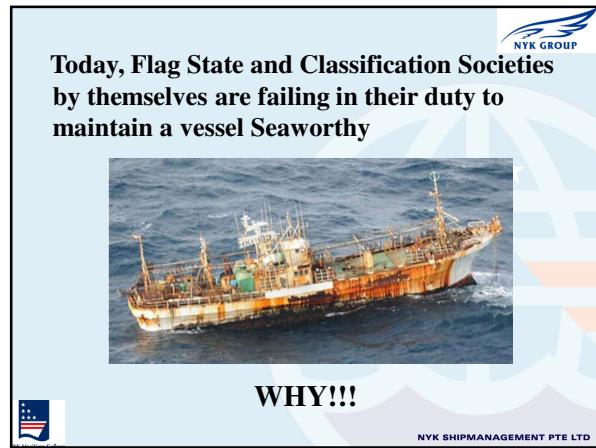
**Further developments:**  
**Freedom of Navigation on the High Seas and**  
**United Nations Convention on Law of the Seas**

**It became necessary for every vessel to be registered at a particular port and to abide by rules set by the administration of that port / country.**

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**Checks for Compliance with all applicable Statutory, International and Local regulations is the responsibility of the Flag state.**

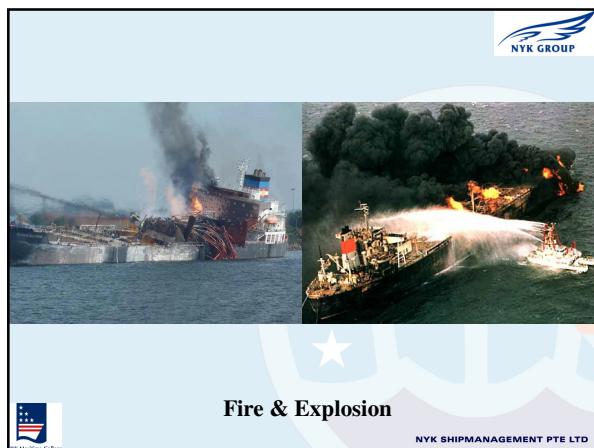




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# Result !!!

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Environmental damages

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Loss of property

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Vessel Detained !!!

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Company Blacklisted !!!

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Implications !!!!

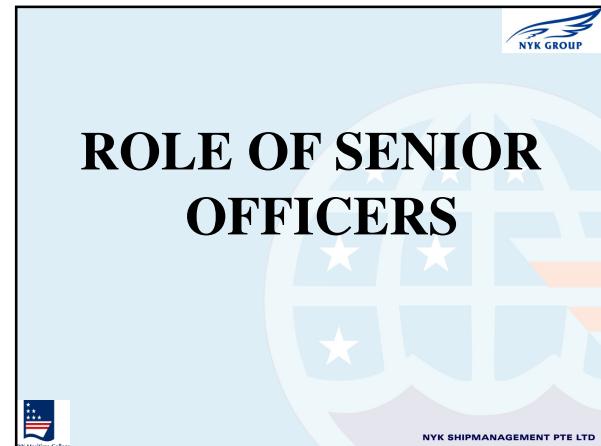
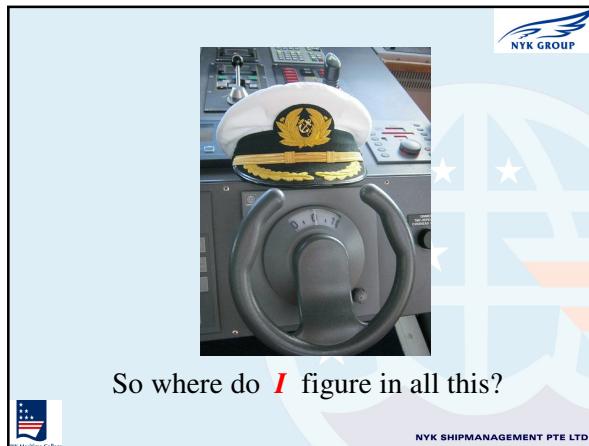
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Off Hire !!!

Photo: ST

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- Master and Chief Engineer are responsible for implementation of SMS on board**

**SMS / S-P-02.10.00 Responsibilities and Duties Assigned (To Master)**

Scope: This chapter is applicable to all vessels.

Purpose: This chapter describes the Authority and responsibilities assigned to the Master.

Authority:

- It is the Master's duty to observe the provisions of the Safety Management System Manual. The Master has the authority to take the following actions in order to secure and maintain safe ship operation and environmental protection:
  - The Overriding authority to make judgments based on the prevailing circumstances in the event of an emergency, etc., and to act accordingly.
  - The authority to request the necessary support and assistance from the Company.
- However, when the Master has exercised the authority (b) mentioned above, the Master shall report to the Company, stating the facts and the reasons thereof. If the vessel is in imminent danger and delayed operations imperative without opportunity or time to contact the Company, Owners and the port authorities, then the Master has suspending authority to sign a contract. Refer to S-P-11.00.

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**SMS / S-P-02.10.01 Responsibilities and Duties Assigned (To Chief Engineer)**

Scope: This chapter is applicable to all vessels.

Purpose: This chapter describes the Authority and Responsibilities assigned to the Chief Engineer hereinafter referred to as the "C.E".

Authority:

- The C.E. has the highest authority in matters relating to supervising, operational control and maintenance of machinery and equipment in the Engine Department. Additionally the C.E. has the authority in matters that are not covered in any of the Company Procedures relating to machinery and equipment. When doing so the Master and Company shall be informed accordingly along with reasons thereof.
- Responsibility: The C.E. is responsible for the following:
  - Overall Management of Engine Department
  - Manning and supervising the overall organization and duties of the Engine Staff
  - To Safe & efficient management and maintenance of various machinery and equipment
  - The C.E. will take the VAE as required in order to optimize overall management.
- Notifying the Master

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**Some SMS Procedures to ensure standard of vessel is maintained for Inspections :**

- Monthly Inspection of Vessel with respective Department Head to grasp the condition of whole ship.
- Weekly Inspections of vessel to ensure good hygiene.
- Signing of Marpol Declaration within a month of taking over command and ensuring compliance.

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- **Navigational Audits** within a month of joining
- Diligent conduct of ECDIS Proficiency test
- Daily Job Order Meetings to ensure Maintenance of vessel carried out safely as per PMS.

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- Ensuring Maintenance as per PMS is diligently carried out avoiding all chances of “**only paper maintenance**”.
- Ensuring Drills are conducted as realistically as possible (without causing any danger to participants).
- Regular Crew Training to upgrade knowledge and skills including shadow play and understudy by junior officers.

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- **Monitoring and Instructing Officers and Crew to ensure actual maintenance, checks are being done:**

There have been recent cases where only Paper maintenance was noted on vessels with up-to-date paperwork but poor condition of actual equipment.

Result:  
Increased findings on hardware and equipment failure on board vessels.  
Checklists filled but not reflecting actual condition on board

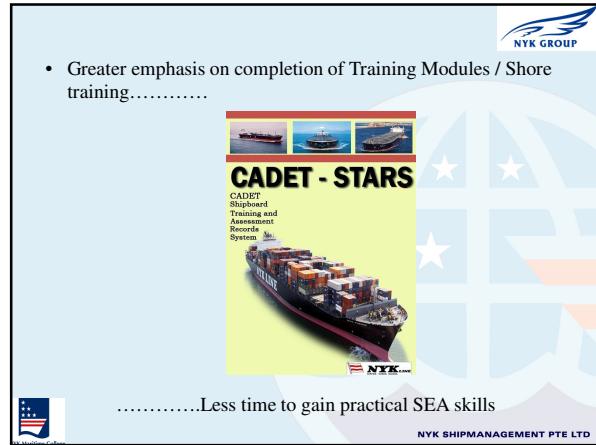
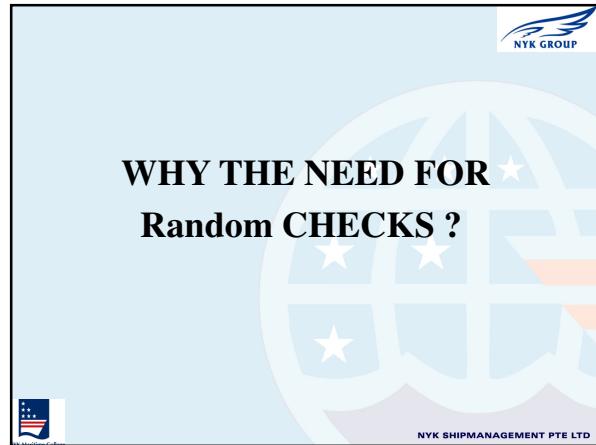
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## Results of paper maintenance!

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**Ships Officers Today!**

**High in Knowledge.....**



**..... Low in skills !!**

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- Faster Promotions ..... resulting in lack of skills!!



Very short time spent in Junior ranks – understudy for next rank!!

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- Different nationalities – Varying work cultures!!



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**Under such conditions, How can we sustain high quality ?**

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- Identification of mistakes/weak areas by regular checks.
- Proposing corrective measures.
- Training of Junior ranks by **Shadow Play** and **On the Job Training** to ensure they are prepared for the next rank.
- Use of behavior and culture knowledge, for convincing and motivating ships crew

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**Key points for any inspection**

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### 1) Gangway/Creating a Good First Impression :-



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### 2) Pre-Inspection Meeting :-



Source: UK P&I

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### 3) Actual Conduct of the Inspection



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- If possible rectify deficiencies “on the spot” when inspector is still on board. Doing this signifies the observation is “MINOR” and “ISOLATED”



- Master can give corrective explanations for certain findings and thereby prevent them being mentioned in the report.

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### 4) After the Inspection



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- Prepare an NCD Z-040000-01FRM for all external inspections (usually called Non Conformity / Deficiency Report) and send to the company.

NYK SMS Manual <Rev. 2015-12-15> Z-040000-01FRM

#### Non Conformity / Deficiency Report (NCD Report)

##### PART 1: REPORT:

Vessel: \_\_\_\_\_ Fleet: \_\_\_\_\_

Audit / Inspection Type: \_\_\_\_\_ If Others: \_\_\_\_\_

Auditor / Inspector's Name: \_\_\_\_\_

Port: \_\_\_\_\_ Authority (e.g MoU/Class/Oil Major): \_\_\_\_\_

Audit / Inspection Date: \_\_\_\_\_ Initial Submission Date: \_\_\_\_\_

Total No. of Non Conformities / Def. \_\_\_\_\_ (enter details of the NC / Def. in Part-3)

Master: \_\_\_\_\_ C/E: \_\_\_\_\_

Comments: (Master's viewpoint of Inspection)

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NYK SMS Manual <Rev: 2015-12-15> Z-040000-01FRM  
Non Conformity / Deficiency Report (NCD Report)

**PART 3: FOLLOW UP**

		// //	Total:
Sr No.	Reference / Dept / Action By	Non Conformity/Deficiency , Cause and Corrective Action Plan	Completion
1	Ref	Non Conformity/Deficiency:	Target Date
	Department	Root Cause:	Actual Date
	Action By	Corrective Action Plan:	OPEN / CLOSE
		OPEN	
	Ref	Non Conformity/Deficiency:	Target Date

PART 1&2 | PART 3 | + : [ ]

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The NCD should address the “Reason” as to **HOW** the “deficiency” remained unnoticed.

“Overlook” “Missed out” “Oversight” usually not accepted as valid reasons for observations.

**“ Overlook”/ Oversight = Negligence**

**Proposed counter measures should address Long Term Action Plan to prevent recurrence.**



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**Where is vetting applicable today!**

- Traditionally vetting was applicable to tankers but now being applied to bulk carriers too (RightShip, Enel inspection in Europe)!
- Charterer inspects a vessel and determines the vessel suitability for the charter
- Ports, terminals, insurers and other maritime industry operators also vet ships to identify and manage risks
- Many ship owners and ship managers use ship vetting services to monitor information about their own vessels
- Some companies arrange for a pre-vetting inspections by special agencies to rectify faults prior the actual inspection.

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**Purpose :** Vessel safety concerns in the late 1990s when ships were sinking off the coast of Australia.

Information Source: <https://site.rightship.com>

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**Impact of the Rightship rating system**

- 230 customers from all industry sectors across the globe
- Primary risk management tools of the grain and soft commodity industry.
- Usage of a star rating system
- 1 star rated ship is most likely to experience an incident with in a year and 5 start least likely

Information Source: <https://site.rightship.com>

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. Big Data + Experience=Predictive Analysis

Statistics = 8 percent of ships given the lowest one-star rating had an incident.  
Less than 1 percent of the five-star ships had an incident.

Information Source: <https://site.rightship.com>

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**RIGHTSHIP** Incidents on vetted vessels in 2017

Bulk or Tanker  
Bulker

RightShip Risk Rating	Percentage of Incidents
1 Star	~18%
2 Star	~5%
3 Star	~3%
4 Star	~2%
5 Star	~1%

As per Rightship website, a one star bulker is 19 times more likely to have an incident than a 5 star bulker

Information Source: <https://site.rightship.com>

RightShip Risk Rating as at 01 January 2017

RightShip rate a ship by evaluating 50 risk factors, providing a risk rating to a customer.

The "approval" relates to the criteria set by individual customers not RightShip, each RightShip customer may well have a different risk appetite,

# Rightship Inspection

Inspection Criteria	Why	Result Impact
<ul style="list-style-type: none"> <li>Annual inspection mandatory for ships aged 14 and over</li> <li>Other inspections on a case by case basis</li> </ul>	Stakeholders want to segregate safe and unsafe ships	A Rating adjustment leading to a 1 star or 2 star rating means NO CARGO prospects for the vessel

Age	0-5 Years	05-10 Years	10-15 Years	15-20 Years	Over 20 Years
Inspection of Ballast Tanks/Void space	Not Applicable	Not Applicable	*Subject to review of the ship's documents	Required	Required
	Guide Time for Inspection				
Handymax	1 day (8-10 hours)	1 day (8-10 hours)	1 days (8-10 hours)	1 days (8-10 hours)	1 days (8-10 hours)
Panamax	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)
Capesize	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)	1.5 days (10-15 hours)

\*The inspector is not required to inspect the ballast tanks and void spaces, if the records and photographs indicates that the vessel's ballast tanks, void space, duct keel and cofferdam have been inspected regularly and the condition of the ship's internal structures were recorded as satisfactory.

## Preparing for a Rightship Inspection!

**I AM PERFECT!**  
Except for like 9 or 10 things.

Pre-vetting checks through use of Rightship inspection questionnaire can enhance inspection result

The inspection questionnaire has 15 sections, each concerning a specific area or function of a ship and consists of 240 pages

## Section 1 to 8

**Section 1 –General information**

In this section, A variety of details are required by the inspector

Such details must be filled up in the RightShip vetting questionnaire ,prior to the inspector's embarkation

**Section 2: Certification and Documentation**

Under this section, Various ships certificates will be checked They may include following

- Trading certificates
- Insurance certs
- MLC related Certs

**Section 2: Certification and Documentation**

- Certificate of Financial security for seafarers
- Condition of class(if any)
- Rightship CAP(condition assessment program) cert for ships greater than 25 years of age

**Section 3: Personnel Management**

Is the vessel's Manning in compliance with the safe Manning certificate?

**Section 3: Personnel Management**

Compliance to Rest hours as per Flag's MLC requirements

## Section 3: Personnel Management

English language proficiency of all crew

Source: e-ducative CatEdu

**SMS / Z-M-00.00 Shipboard Organization**

Version: 2016.08.01  
Approved By: Head of GMSC

4.5 Working Language  
The Company declares "ENGLISH" as the official working language. All crew members shall communicate with each other on board the ship and with the Company in "ENGLISH" language.  
The official working language shall be stated in the ship's log book. On JG Flagged vessels this shall also be stated in the official log book.

## Section 3: Personnel Management

Master's ship handling training

**Hazmat training(only for vessels carrying MHB)**

**Officer Matrix and STCW cert check**  
overlap period during handovers

## Section 3: Personnel Management

❖D&A Policy  
(external agency test records)

The policy document includes sections on Scope, Purpose, Responsibility, and Water. The certificate shows a table of results for various tests.

## Section 3: Personnel Management

ECDIS training-Generic and Type specific familiarization

**Air con operational condition**

Has successfully completed the following 5-Days training course in "The Operational Use of ECDIS"  
Complying with the principle laid down in STCW (including 2010 Manila Amendments) section AII/1, AII/2, AII/3 and B-II/2 and based on IMO Model Course L.2" (2012 edition) "The Operational Use of Electronic Chart Display and Information Systems" (ECDIS).

**YOU KNOW IT'S HOT**  
**WHEN EVEN THE DOG STARTS TO MELT**

## Section 4: Navigation

- Standing orders
- Log books

• Maneuvering information and its familiarity by the OOW's

## Section 4: Navigation

**Navigation Checklists**

Section	Action	Check
VMC Alert	1. No Rain or Snow (0000 - 0500 UTC) 2. Day Engineer: Engine Room	✓
VMC Alert	1. Aggressive chop (over 1m height) 2. Day Engineer: Engine Room	✓
VMC Alert	1. Weather information printed version: a) Weather forecast (0000 - 0500 UTC) b) Wind forecast (0000 - 0500 UTC) c) Water forecast (0000 - 0500 UTC)	✓
Heavy Weather Checklist	1. Notify 2. Master 3. Chief Engineer/ Duty Engineer	✓

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## Section 4: Navigation

**Bridge equipment tests**

**Master/Pilot Info Exchange**

**UKC and air draft**

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## Section 4: Navigation

**Fire and safety rounds**

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## Section 4: Navigation

**Bridge Manning Matrix**

		A. Watch Levels					
Job	Conn. taking conn.	Traffic Information	Communi-cation	Naviga-tion	Others	Look out	Steerin-g
W.Lev e1	ARP A	VHF	Fixing position	Engineer	Telegraph.	Look out	Steering
W.Lev e2	Maste-r	OOW	OOW	Stewar-d	Engi-neer	Rec-ord	Keep-ing
W.Lev e3	Maste-r	Extra Officer	OOW	Look out	AB		

**A. Watch Levels / Job Description**

Job	Responsi-bility	Inspec-tion	Measur-ment	Moni-tor	Attend	Record	Assist
Overall In-charge	Round	(as applicable)	Paramet-ers	to Alarms			as requi-red
Start / Stop Master-er							
W.Lev e1		Duty Engineer					Oiler
W.Lev e2	Chief Engineer	Duty Engineer					Oiler

**Echo sounder usage**

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## Section 4: Navigation

**Nav Lights working**

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## Section 4: Navigation

**ECDIS-Operation, failure, maintenance procedures**

## Section 4: Navigation

**T&P, Nav Warnings**

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## Section 4: Navigation

Passage planning(User charts),

## Section 5: ISM System

SMS and internal audit (closure of past findings)

## Section 5: ISM System

SMS review

## Section 5: ISM System

Safety officers( having cert. of S/Officer training)

## Section 5: ISM System

Enclosed spaces identification

**Definition:**  
1.1 Enclosed / Confined Space (hereafter referred to as Enclosed Space)  
A space which is substantially enclosed, and which  
a) has limited openings for entry and exit;  
b) limited capacity to provide self-rescue in case of emergency;  
c) is not designed for continuous worker occupancy.

## Section 5: ISM System

Appointment of a 'qualified' Competent person and Attendant during enclosed space entry

**Procedure (Refer to S-P-09-30-03):**

4.1 Enclosed Space related Persons:  
 a) Competent Person - Any specially trained company staff, C/O or C/E.  
 b) Responsible Person - C/O or C/E  
 Additionally for Gas Carriers Only -  
 Additionally for Gas Carriers - Any person who is qualified to enter Machinery Room and Motor Room on LNG Carriers and (only) Compressor Room for LNG Carriers.  
 c) Attendant Supervising Entry - Any person who is sufficiently trained within the safety procedures and has been appointed by the competent person.  
 d) Authorized Team Leader - Foreman of a shore workshop and Ships officers.

SMS Appendix has more details on same

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## Section 5: ISM System

Record for conduct of Enclosed space Drill



NYK ISM Manual Drill Schedule of exercises other than Tandem (Rev: 2014-11-11)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Annual Drill	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	
Enclosed Space Drills and Inspections	Every 12 months	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	

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## Section 5: ISM System

- Availability of evidence for closure of

M-SCAT®

Marine Systematic Cause Analysis Technique



- Near miss reporting
- Non Conformity reporting

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## Section 5: ISM System

Hot work



NYK ISM Manual		(Rev: 2014/01)	HOT WORK PERMIT (Dry Vessel)	
The permit is to be completed prior to any hot work operation being performed outside of the engine room workshop.			HOT WORK PERMIT (Dry Vessel)	
Vessel Name:		Set No:	HTW/2014/01	
Work Permittee name & Job:		Work location:		
Location of work without:				

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## Section 5: ISM System

PTW(permit to work) systems usage

Bad Photo(No Harness worn)



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## Drill schedules

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DRILL TYPE	INTERVAL	NYK ISM Manual											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Abandon Ship	Every Month	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	
Oil Spill Response	Every Month	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	
Fire Fighting Drills	Every Month	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	
Emergency Shutdown	Every Month	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	
Abandon Ship and use of Lifeboat	Every Month	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	

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## Section 5: ISM System

Cargo hold light usage and its compatibility with the Cargo



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## Section 5: ISM System

PPE Matrix, use of RPE(respiratory PPE)/Safety goggles in case of dusty cargoes

Personal Protective Equipment	
Task	Protective Equipment
Dust Mask	Respiratory Protection Equipment (RPE)

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## Section 5: ISM System

Safety meeting

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Feedback from VM

Safety and sanitary meeting

Matters needing urgent shore attention-EPPB will be landed for shore service for next voyage if might be included in GMSS annual survey-Attached is the reply from MOOS. Please feel free to advise your concerns if any...Stop cards issued this month = 1 Near miss = 18, Significant near miss = 13. Wire for gangway boom and refractory base was improperly laid out on its drum after a scheduled wire replacement. Retract and extend was reversed and does not match on the remote control. Discrepancy between remote control and actual motion of the gangway may lead in an accident. Thanks a lot for the high amount near miss reports. It is very helpful in enhancing the safety culture onboard.

Review and reply of Safety and Sanitary meeting

Sample feedback from VM

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## Section 5: ISM System

Use of ship-shore safety checklist

BULKER OPERATION MANUAL	
Loading Cargo Work Operations/Deballasting	
Port	Terminal Quality
Airflow direction	Minimum air flow rate
Calculated dep.	Air straight

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## Section 5: ISM System

Smoking area designation and evidence of stevedores acceptance of ship's No smoking on deck policy

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## Section 5: ISM System

Portable gas detectors( 4 gas runner) and calibration

Work Instruction W.I.Z - C218   How to Calibrate Multi-Gas Detector GX-111   Rev.0	
Issue Date : 15 Nov. 2011   Prepared By: CO   Approved by: Master   To: All Crew   1.2	
C218 - How to Calibrate Multi-Gas Detector GX-111	
1) ALARM: As the instrument is progressing through its turn-on program or normal operation, it checks for malfunction such as abnormality in the program, a low battery and a missing or faulty detector. Pressing the ALARM SILENCE switch will silence it.	

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## Section 5: ISM System

WIAS system testing and records

M.V. FRONTIER ROSE

NYK 658 ZAKOGAWA-GLACSTONE WATER INGRESS ALARM SYSTEM TEST

LOCATION	WATER LEVEL ALARM TEST	REMARKS
1. NO. 1 CARGO HOLD LOWER	30 CM-15	SATISFACTORY
2. NO. 3 CARGO TANK B	30 CM-15	SATISFACTORY

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## Section 5: ISM System

**Welding + gas equipment condition**

Bad Photo      Good Photo

**Bridge Pyrotechnics**

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## Section 5: ISM System

**LSA/FFA as per SOLAS(usage of EEBD during drills)**

IMO symbols

Bad condition photo      Good condition of IMO Symbols

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## Section 5: ISM System

**MSDS for bunkers, paints, chemicals, corrosive and toxic materials**

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## Section 5: ISM System

**Access ladder condition(bottom platform of ladder, inclination not more than 55, lighting, lifebuoy, SWL marking, fall condition, gear box condition)**

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## Section 5: ISM System

**Pilot ladder condition**

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## Section 5: ISM System

**Ship specific SOLAS training manual and fire training safety operation booklet**

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## Section 5: ISM System

Helicopter hatch certificate from class



Usage of helicopter checklist, and RA for this operation

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**STRENGTH CALCULATION  
HATCH COVER  
HELICOPTER LANDING AREA**

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## Section 6: Pollution Prevention and Control

ORB

2018. 11. 16. Sunday  
N  
561. Ulsan, Japan  
16.9 % Gt oil 21L removed  
to Airt. Gt oil storage tank  
16.9 % Gt oil storage tank  
16.9 % Gt oil storage tank  
C [1.2] Filled 1100 slugs from Day oil tank to Airt. oil tank (1100x1.2) kg



Sample-Incorrect entry

MEPO.14/04/17/09/02 Annex chapter 2  
Usage of code Q: Accidental or other exceptional discharges of oil  
Example #12  
Example #12  
General Pollution  
Date: 2018/11/16  
Code: Q  
Item: Removal of operational/generation of oil from oil storage tank  
Description: Oil tank cleaning  
Type and quantity of oil removed: 1100L  
Remarks: signed (Officer-in-charge, Name & Rank) 01-MONTH-YYYY

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## Section 6: Pollution Prevention and Control

Discharge to shore reception facilities

https://www.oilbarrier.co.uk/0227.html

Sludge discharge ops

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## Section 6: Pollution Prevention and Control

SOPEP



Oil Spill clean up(for an actual spill)

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## Section 6: Pollution Prevention and Control

Marpol Annex V requirements related to handling of operational waste incident to hold cleaning and handling of cargo residues

**SKULD**

**RECORD OF DISCHARGE OF CARGO RESIDUES  
(Ships that carry and/or transport)  
Datedate 01 or later**

**Ship's Name:** Date/Year 01/01/2018

**Carry Category:**  
I. Cargo Residues (non HME)  
II. Cargo Residues (HME)

**Residue Category:**  
1. Residue from the day (including port call)  
2. Residue from the day after the day of port call  
3. Residue from the day before the day of port call

**Estimated amount Discharged:**  
Total weight in metric tonnes  
In metric tonnes  
In metric tonnes

**Port and/or position of the ship for discharge into the sea/sea area:**  
Port name  
Position  
Date/Year

**Contracting port:**  
Port name  
Position  
Date/Year

**Cargo Residues:**  
Simplified overview of the discharge provisions regarding cargo residues of the revised MARPOL Annex V  
This simplified overview is intended for reference purposes only and cannot be used as a substitute for the annexures, annexes and schedules of the MARPOL Annex V.  
The simplified overview is based on the latest version of the MARPOL Annex V (as of 01 January 2018) and does not consider the revised MARPOL Annex V.

**Offshore platforms and oil and gas wells within 300 m of each platform:**  
Cargo residues are considered to be in the marine environment and not consented to exist within 300 m of such platforms

**Discharge permitted:**  
Discharge permitted  
Discharge prohibited  
Discharge prohibited

**Source:** Skuld

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## Section 6: Pollution Prevention and Control

Leakage from pipelines or manhole



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## Section 6: Pollution Prevention and Control

**OWS condition**

**Engine room bilge condition, steering gear bilge condition**

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## Section 6: Pollution Prevention and Control

**HME declaration in the shipper's declaration**

EHS/HME (see Chapters 2.10 and 2.9.3 of the IMDG Code and MARPOL Annex V) Cargo residues must be disposed of in accordance with MARPOL Annex V

EHS/Marine Pollutant?  Yes  No  
Human Health Criteria Met  Yes  No  Not available  
Rubber/Plastic  Yes  No

Note: Human Health Criteria data may not be available only until 31 December 2014. From 1 January 2015 Human Health Criteria data must be available.

**SEEMP**

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## Section 6: Pollution Prevention and Control

**Garbage management plan and GRB**

**Condition of garbage storage area**

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## Section 6: Pollution Prevention and Control

**Sewage treatment/holding system usage**

<https://gcaptain.com/long-term-solutions-for-sewage-treatment/> NYK SHIPMANAGEMENT PTE LTD

## Section 6: Pollution Prevention and Control

**Type of exhaust gas cleaning system and its usage**

**The CSNOx system**

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## Section 7: Ship's Structure

**Unreported Hull repairs**

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## Section 7: Ship's Structure

**Cargo Hold, Ballast and Void spaces inspection records**

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## Section 7: Ship's Structure

Coating technical file for ships delivered after 1<sup>st</sup> July 2012

SC.22G  
LSC.22G  
MSC.215(82)  
SOLAS  
PERFORMANCE STANDARDS FOR PROTECTIVE COATINGS  
FOR THE DELIVERY OF SOLID BULK CARRIERS  
IN ALL TYPES OF SHIPS AND DOUBLE-SIDE SKIN  
OIL TANKERS  
MSC.215(82)  
content

### Enhanced survey report file

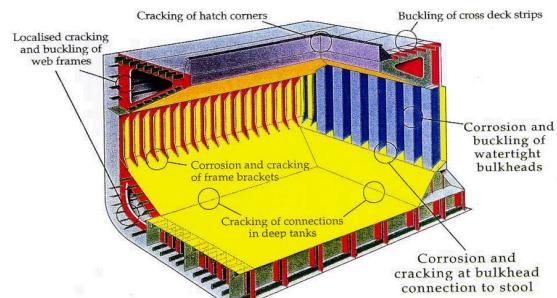
RESOLUTION MSC.26(84)  
(adopted on 16 May 2008)

ADOPTION OF AMENDMENTS TO THE GUIDELINES ON THE ENHANCED PROGRAMME OF INSPECTIONS DURING SURVEYS OF BULK CARRIERS AND OIL TANKERS (RESOLUTION A.744(18), AS AMENDED)



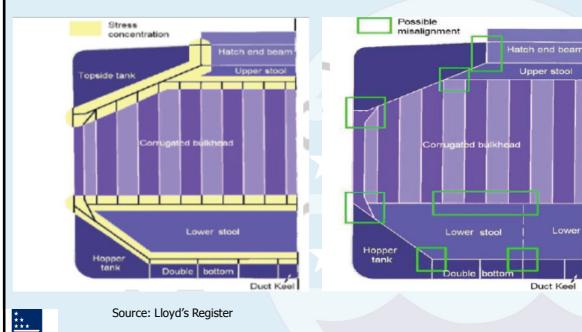
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### Structural Problems: Bulk Carrier



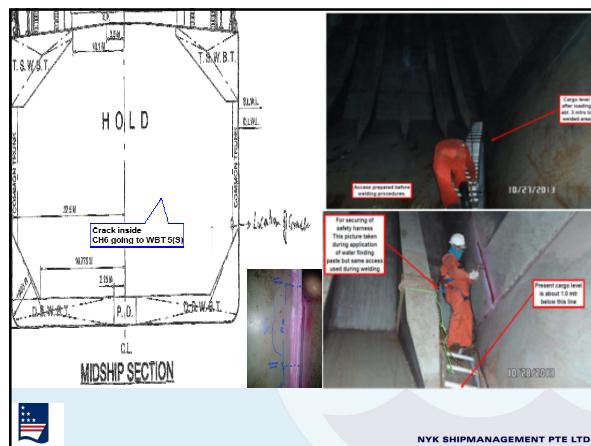
### Cargo Hold (incl. underdeck, bulkheads & stools)

Critical areas in cargo hold



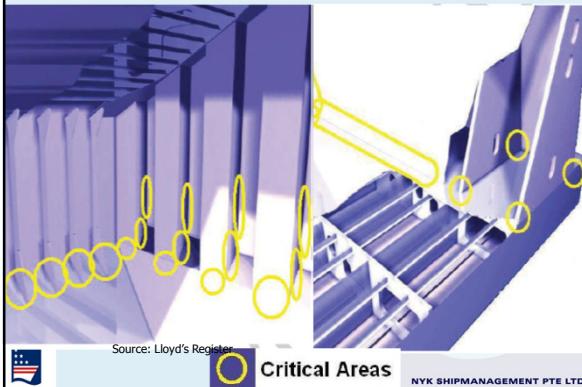
Source: Lloyd's Register

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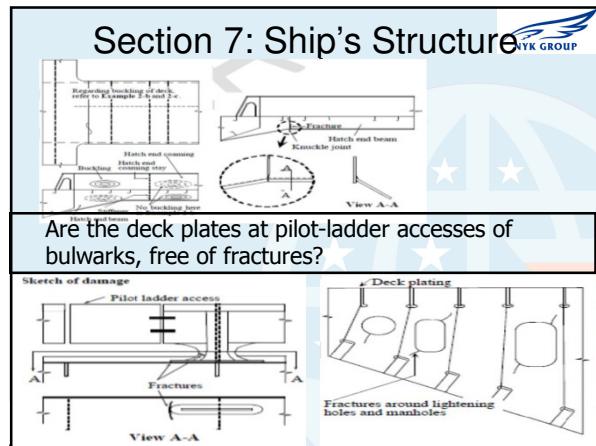
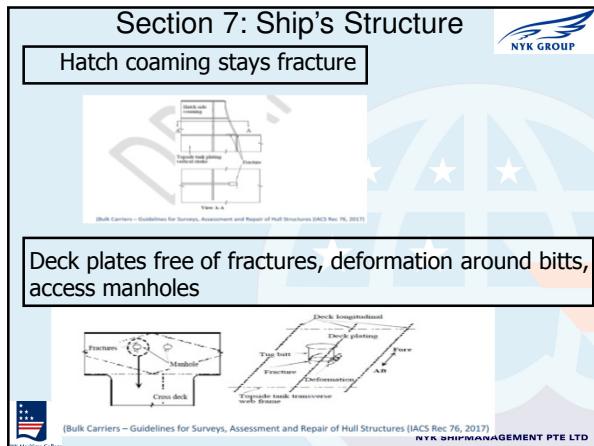
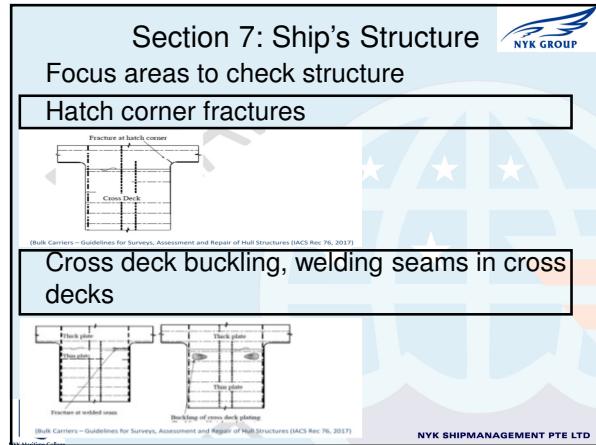
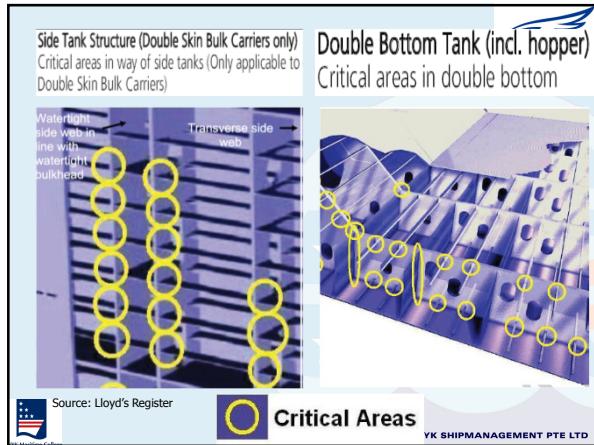
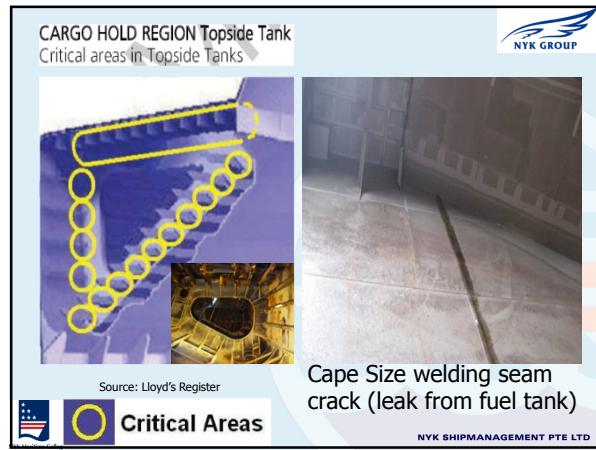
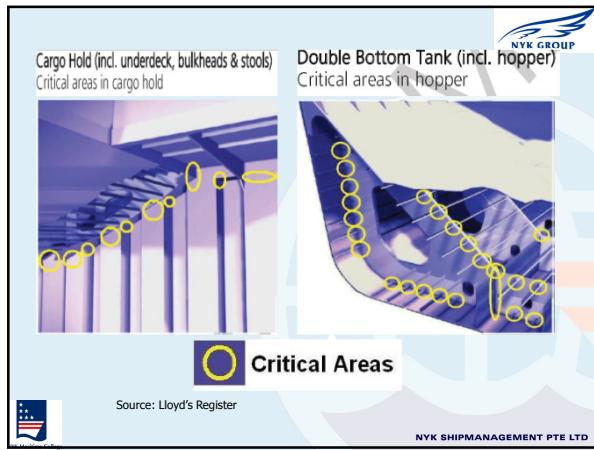
### Cargo Hold (incl. underdeck, bulkheads & stools)

Critical areas in cargo hold

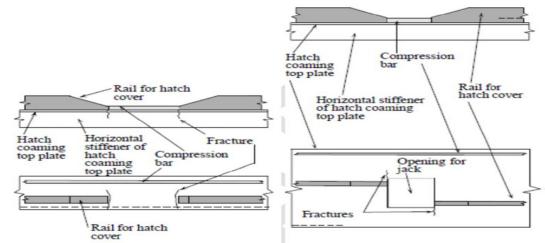


Source: Lloyd's Register

Critical Areas



## Section 7: Ship's Structure

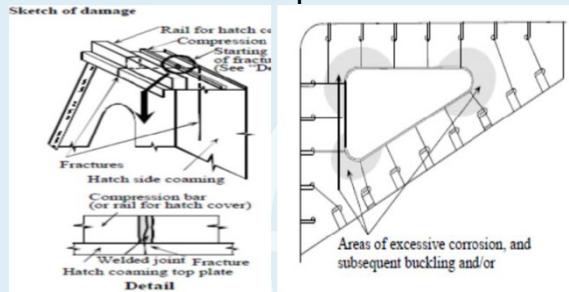


Hatch coaming top plates at the termination of rails for hatch covers, free of fractures?



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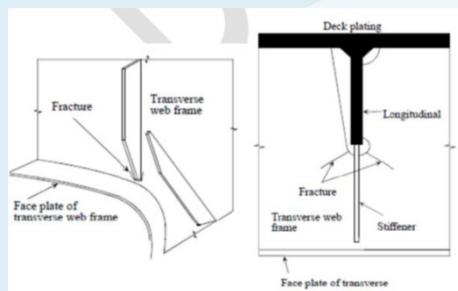
## Section 7: Ship's Structure



Hatch coaming and hatch end beams buckling, fractures at hatch end knuckle join

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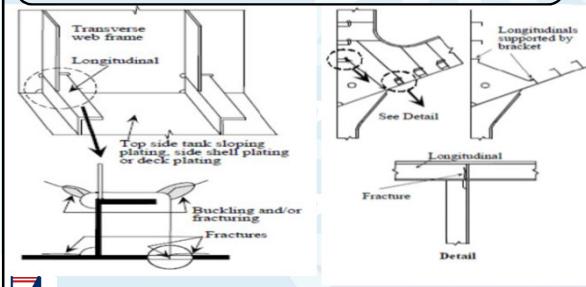
## Section 7: Ship's Structure



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## Section 7: Ship's Structure

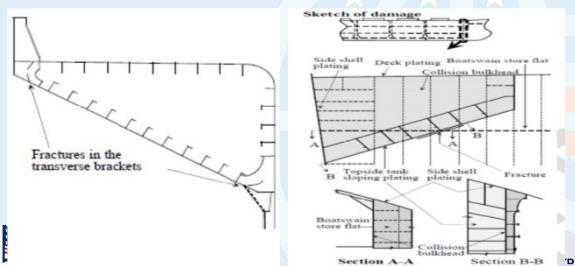
Are areas around the unstiffened lightening holes and manholes in wash bulkheads of topside tanks, free of fractures



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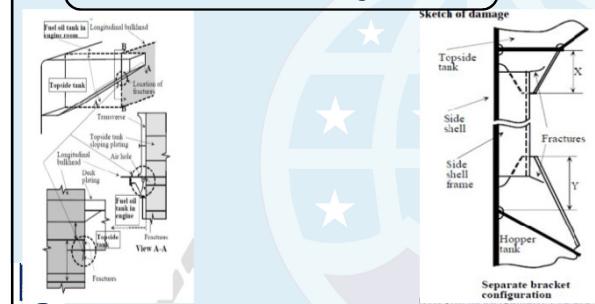
## Section 7: Ship's Structure

Are the web plates of topside tanks in the vicinity of the radiiuses of opening, free of buckling?



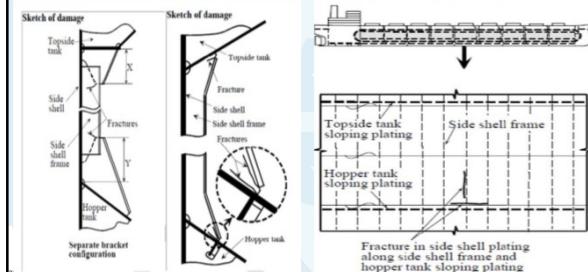
## Section 7: Ship's Structure

Are the transverse webs of topside tanks at sniped end of stiffener and at the slots free of fractures and buckling?



## Section 7: Ship's Structure

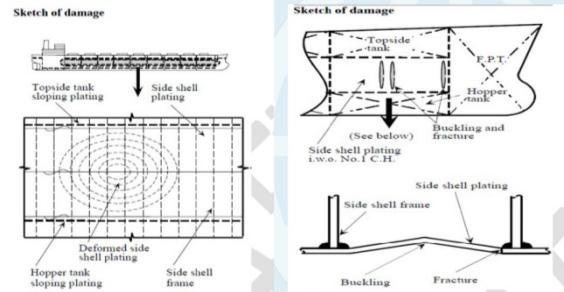
Are the lowest longitudinals at transverse web of topside tank frames free of fractures?



## Section 7: Ship's Structure



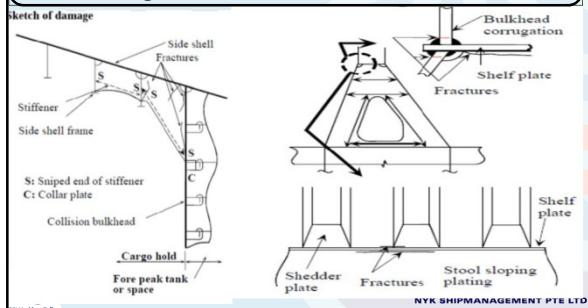
Are transverse brackets in the topside tanks free of fractures?



## Section 7: Ship's Structure



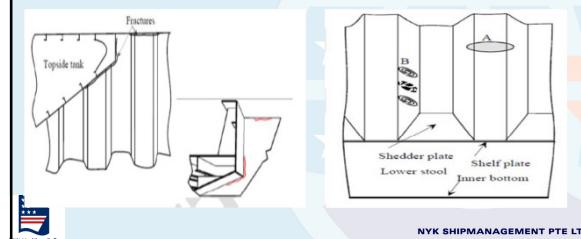
Are the structures in way of the collision bulkhead at its intersection with the topside tank structure in the foremost cargo hold free of fractures?



## Section 7: Ship's Structure



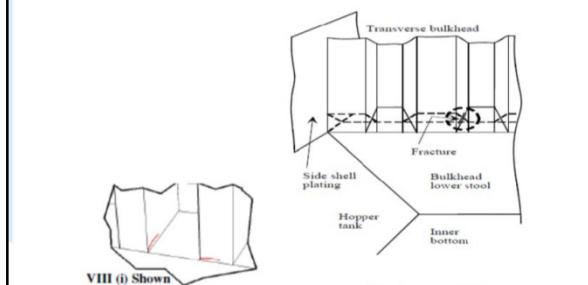
Are the structures in the way of the engine room forward bulkhead at its intersection with the topside tank structure in the aftermost cargo hold free of fractures?



## Section 7: Ship's Structure



Are the brackets at the termination of the frame located in the cargo hold side structure free of fractures?



## Section 7: Ship's Structure



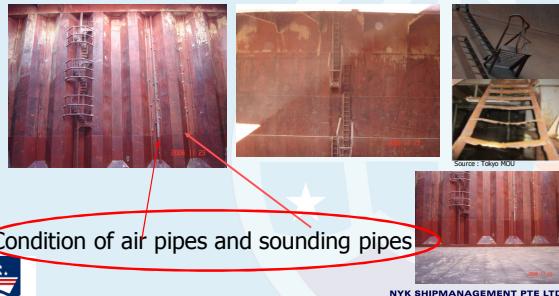
Are the side shell frames on the cargo hold side structure, at the bracket's toe, free of fractures?

7.22 to 7.29-Similar detailed inspection guidelines for other areas



## Section 7: Ship's Structure

Condition of vertical ladders, spiral ladders, rungs, stations and platforms



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## Section 7: Ship's Structure

Duct keel access, ventilation and lighting



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## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Procedures and publications

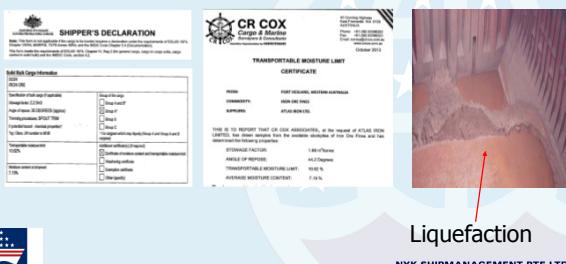


Information about cargo and characteristics prior loading



## Section 8: Cargo Operation- Solid bulk cargo other than Grain

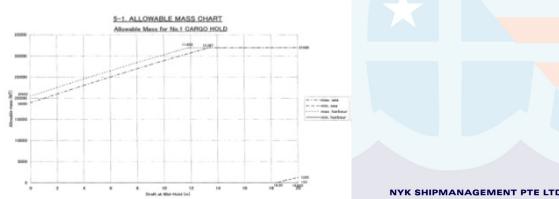
TML, Moisture content, shipper's declaration



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## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Inspector may enquire about ballast/deballast rate, maximum allowable load density, max allowable load in a hold etc. to check knowledge level of officers

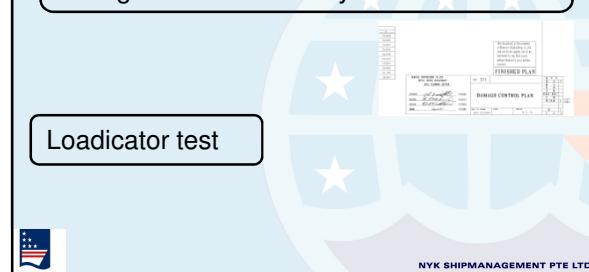


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## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Approved damaged stability, stability and loading booklet availability

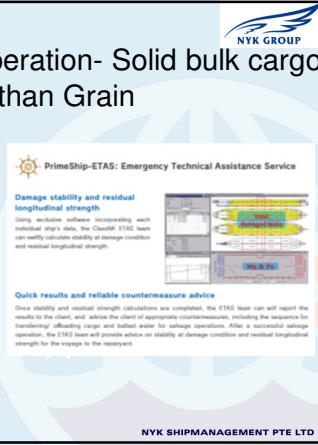
Loadicator test



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Name of SERS providing technical assistance(for damage stability)



Section 8: Cargo Operation- Solid bulk cargo other than Grain

## Procedures and guidelines for following

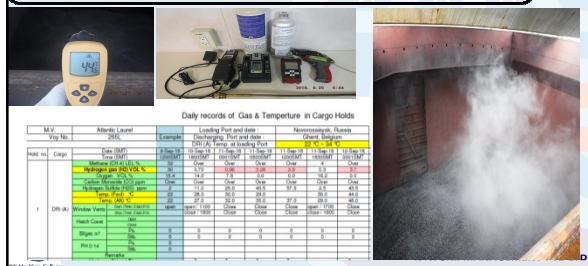
- Ballast hold filling procedures
  - Hold cleaning procedures



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## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Officers aware of cargo hazards?  
Records for Voyage monitoring of cargoes



## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Loading sequence(stresses, stability, synchronization of loading sequence and ballast)



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Any limitations or restrictions specified in the loading manual



Section 8: Cargo Operation- Solid bulk cargo other than Grain

For cargoes not listed in the IMSBC code, certification from a competent authority must be available

## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Loading/discharging plan prepared, and understood



Ballast and cargo operations log availability



## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Coal carriage monitoring equipment availability(gas<<methane, oxygen, CO>>, temp and PH)

NYK SMS Manual		(Rev 2011-02-05) (G-0710202-07/FM)									
M.V. VOYAGE	FRONTIER ROSE	RECORD FOR GAS & TEMPERATURE IN CARGO HOLD									
		LOAD PORT & DATE: KLAUS TONG, AUSTRALIA / 17 NOV 2015		DISC. PORT & DATE: DHARMA, INDIA / 09 DEC 2015		FORM No. GFM-07/FM Revision-3					
HOLD NO.	BRAND AND QUANTITY	DATE CONDITION	27-Nov-15	28-Nov-15	29-Nov-15	30-Nov-15	1-Dec-15	2-Dec-15	3-Dec-15	4-Dec-15	5-Dec-15
1	COAL GELLINEKAH	METHANE LEL %	4	0	0	9	5	6	6	7	
		OXYGEN VOL %	18.1	20.3	19.0	17.4	18.2	15.4	14.7	12.8	13.1
		CARBON MONOXIDE ppm	9	0	1	3	2	3	5	6	
		TEMPERATURE °C	30.0	30.0	30.0	30.0	30.0	31.0	31.0	31.0	
		VENTILATION	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	
		METHANE LEL %	22	5	7	13	15	16	26	4	8

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## Section 8: Cargo Operation- Solid bulk cargo other than Grain

Oxygen depletion hazard understood or not

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## Section 8: Cargo Operation- Bulk Grain

- Use of SERS
- Cargo monitoring in accordance with sequence to ensure stresses/stability requirements are in compliance
- Ballast hold loading, ballasting and deballasting procedures
- Hold cleaning guidelines



## Section 8: Cargo Operation- Bulk Grain

- Carriage of Publications
- Info about Cargo and its characteristics prior loading
- Examination and sampling of grain during loading
- DOA and grain loading manual availability
- Class approved Loadicator and result comparison with test condition

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## Section 8: Cargo Operation- Bulk Grain

- Hold cleaning standard-Hospital clean or Grain clean
- Restrictions and limitations to loading if any
- Officers familiar with risk, hazard and carriage of grain cargoes
- UT testing of hatch covers prior loading

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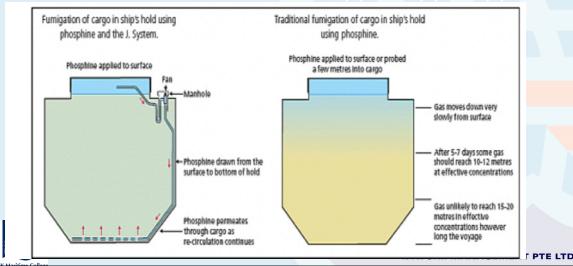
Section 8: Cargo Operation- Bulk Grain

- Fumigation instructions prior arrival load port
  - Contingencies and problems associated with fumigation



## Section 8: Cargo Operation- Bulk Grain

## Pre and Post fumigation statements provided to the Master



## Section 8: Cargo Operation- Bulk Grain

Checklist before and after fumigation application prepared and discussed

Air con intakes controlled as required

## Procedure for entering cargo holds under fumigation



## Section 8: Cargo Operation- Bulk Grain

- Safety procedures compliance with IMO publication
  - Training of crew with fumigation related procedures



Section 8: Cargo Operation- Bulk Grain

## Sealing of areas containing fumigants and adjacent areas



Section 8: Cargo Operation- Bulk Grain

## Checklist before and after fumigation application prepared and discussed

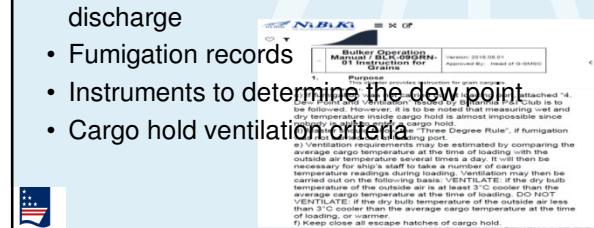
Air con intakes controlled as required

## Procedure for entering cargo holds under fumigation



Section 8: Cargo Operation- Bulk Grain

- Information about fumigants passed on to discharge port prior arrival
  - Gas Free cert provided prior start of discharge
  - Fumigation records
  - Instruments to determine the dew point
  - Cargo hold ventilation criteria



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Grain calculations(VHM,  
Trimmed/untrimmed ends, fluid GM, angle of  
shift-Inspector may check some grain  
calculations)

NYK GRO

- Cargo light fuses to be removed for fire prevention
  - Cargo operations log

## Section 8: Cargo Operation- Bulk Grain

### Loading/Discharging sequence preparation,

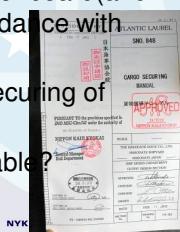
Hold bilge cleaning

Section 8: Cargo Operation- Bulk Grain

Oxygen depletion dangers due grain carriage known to the crew?

## Section 8: Cargo Operation- General Cargo

- Publications carried
  - Cargo information provided
  - IMDG related documentation onboard (and segregation/stowage in accordance with the IMDG code)
  - Procedures for lashing and securing of cargo in the SMS system
  - Cargo securing manual available?



Section 8: Cargo Operation- General  
Cargo

- Inspection and maintenance record for cargo securing devices
  - Procedures for removal of damaged securing devices

For Timber carrier and non cellular vessel, roro vessels, reefer container –questions have bee Omitted

## Section 8: Cargo Operation- General Cargo

- Class approved Loadicator
- Officers aware of strength limit of tank tops, tween decks, hatch covers and weather decks, and this info is posted in ship's office
- Preparation of pre stowage and stowage plans
- Calculation of forces associated with stowage of large units



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## Section 8: Cargo Operation- General Cargo

- Dangers with sudden course alterations
- Persons engaged in cargo securing must attend a IMO model course 3.18
- Hold cleaning
- Fumigation related precautions and checklists
- Necessary instruments to determine dew points, record of calibration, cargo hold ventilation, cargo ops log



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Thank You



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**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Compression bars/coaming top water channels free from corrosion

Drain holes clear, inboard coaming faces with absence of rust stains, NR valves in good condition

**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Cleats/Rubber washers in good working condition

Coaming tops free of grooves

**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Side and Cross-joints rubber seals in good condition

Rest pads wear

**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Hatch cover panels free of misalignment?

**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Rubber seal retaining channels in good condition?

Cross joint seal retaining channels and cross joint compression bar free of corrosion?

**Section 9: Hatch Cover and Lifting Appliances**

NYK Maritime College NYK GROWTH

Are the following parts of hatch covers, where applicable, all in good order and do they appear to be well maintained?

## Section 9: Hatch Cover and Lifting Appliances

Wheels/bearings or track-way

Hydraulic system including hoses





# Section 9: Hatch Cover and Lifting Appliances



Chains, Link pin and safety pin



# NYK Maritime College

## Section 9: Hatch Cover and Lifting Appliances

# NYK Maritime College

## Section 9: Hatch Cover and Lifting Appliances

## Section 9: Hatch Cover and Lifting Appliances

**Ballast pumping systems, piping, control valves, ballast valves in good condition**



**NYK Maritime College** **NYK GROUPE**

## Section 9: Hatch Cover and Lifting Appliances

Cargo hold ventilation system in good condition

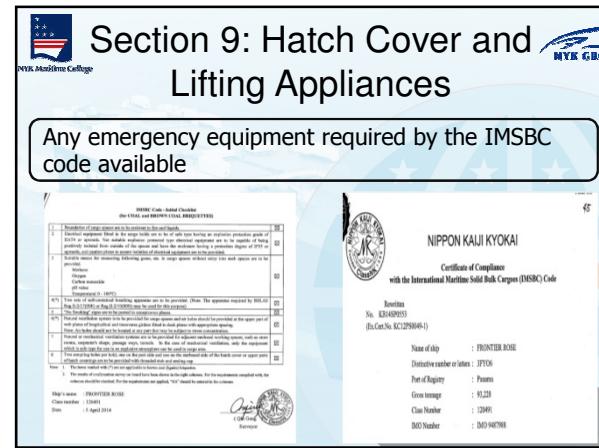


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**NYK Maritime College** **NYK GROUPE**

## Section 9: Hatch Cover and Lifting Appliances

Any emergency equipment required by the IMSBC code available



NIPPON KAIJI KYOKAI  
with the International Maritime Solid Bulk Carriers (IMSBC) Code

Bunkering No. K348955  
(Ex.Cat.No. KC/25984-1)

Name : FRONTIER ROSE  
Domicile number or letters : JPT01  
Port of Registry : Panama  
Gross tonnage : 91,228  
Class Number : 1249F  
DOD Number : DAD 94878

None of ship : FRONTIER ROSE

Date issued : 1 April 2014

**NYK Maritime College** **NYK GROUPE**

## Section 9: Hatch Cover and Lifting Appliances

Examination and load test records for lifting appliances available

Hoist and Luffing wires of cranes in good condition



https://www.bunker1st.com/en/?p=34476

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## Section 9: Hatch Cover and Lifting Appliances

Structure, foundation and mountings of cranes in good condition



Cargo crane machinery and controls tested and maintained

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**NYK Maritime College** **NYK GROUPE**

## Section 9: Hatch Cover and Lifting Appliances

Grab maintained, maintenance in PMS?



Loose gear of lifting appliances marked , certificates available

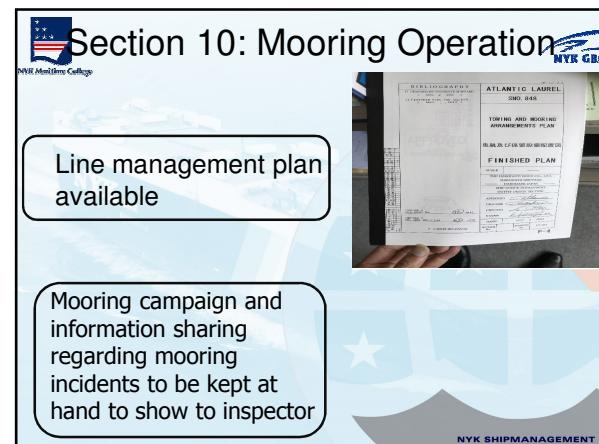
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## Section 10: Mooring Operation

Line management plan available

Mooring campaign and information sharing regarding mooring incidents to be kept at hand to show to inspector



ATLANTIC LAUREL  
IMO 948

TOWING AND MOORING ARRANGEMENTS PLAN

FINISHED PLAN

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## Section 10: Mooring Operation

**NYK GROWTH**

**Mooring rope  
(and tail rope, if any)  
Certificates**

Mooring Arrangement	
W1-1	RPI1P08213-1
W1-2	RPI1P08213-2
W2-1	RPI1P08213-3
W2-2	RPI1P08213-4
M1-1	RPI1P08213-5
M1-2	RPI1P08213-6
M2-1	RPI1P08213-7
M2-2	RPI1P08213-8
ML-1	RPI1P08213-9
ML-2	RPI1P08213-10
ML-3	RPI1P08213-11
ML-4	RPI1P08213-12
ML-5	RPI1P08213-13
ML-6	RPI1P08213-14
ML-7	RPI1P08213-15
ML-8	RPI1P08213-16

**Winch brake  
rendering setting and  
its test records**

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**NYK Maritime College**

## Section 10: Mooring Operation

**NYK GROWTH**

**Mooring lines correctly deployed and tended(to avoid sharp angles, chafing damage or criss cross)**

Chafe protectors are made from Dyneema or a polymeric coated fiber with a highly abrasion-resistant material. Examples of chafe protectors are shown below.

Closed chock type

Tubular type (✓ recommended)

Sliding chafe sleeve (✗ not recommended)

HUPE Belt, PET Belt

(\*) NOTE: Tubular type and Sliding chafe sleeves have a high potential risk of human injury if they become entangled. It is not recommended to use such chafe sleeves - instead, opt for a flexible assessment by contractor and ship.

**NYK SHIPMANAGEMENT**

**NYK Maritime College**

## Section 10: Mooring Operation

**NYK GROWTH**

**Availability of crew members to assist in  
mooring operation and tending of lines**

SMS / S-P-09 70.02  
**Safe Mooring Operations**

Version: 2018.08.01  
Approved By: Head of G-SMSC

e) Minimum Manning  
Following minimum personnel shall attend mooring operations:-  
i) Mooring/ Unmooring at berth, Pier, Buoy, STS, SBM: 3 crew and Deck Officer  
ii) Making fast and letting go of Tug: 3 Crew and Deck Officer  
iii) Anchoring and heaving up anchor: 2 Crew and Deck Officer  
iv) Laying up and storing of ropes/wires on deck: 3 Crew  
v) Rigging/ Adjusting fire wire (If Applicable): 2 Crew and Deck Officer

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## Section 10: Mooring Operation

**NYK GROWTH**

**Mooring lines correctly reeved, winch out of  
gear, brake secured(i.e. not on gear or  
drum)**

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## Section 10: Mooring Operation

**NYK GROWTH**

**Split drums set up correctly**

< Tokyo Seiko Rope >  
Five(5) or more wraps based on one(1) layer must be always remained on the tension side of the split drum winch at the lines full extension.

**Mooring tail connecting links proper?**

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## Section 10: Mooring Operation

**NYK GROWTH**

**Mooring ropes stowed clear of deck,  
mooring station well lit, clean/free of leaks**

**Monkey fist free of weight**

<http://survival-mastery.com/survivalmonkey-monkey-fist.html>

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**Section 10: Mooring Operation**

No painting of snap back zones, entire mooring area to be marked clearly as a potential snap back zone

**DANGER ENTERING SNAP BACK HAZARD ZONE**

Source: GL 07 Safe Operation - 2009/04 > Mooring System Management Plan

**Section 10: Mooring Operation**

Are appropriate stoppers in use and are mooring ropes turned up to bits correctly?

**Brake drums, operating levers, linkages appear to be good condition?**

**Section 10: Mooring Operation**

Bitt chocks marked with SWL?

**NYK SMS Manual**

**Signs and Notices**

Facilities	Type	Value	Mark the safe working load (SWL)
Stanchions	Top	Value	<input type="checkbox"/> Mark the safe working load (SWL)
Working area around working bitt	Line load Area	Value	<input type="checkbox"/> Mark the safe working load (SWL)
The deck drive system	Line load Area	Value	<input type="checkbox"/> Mark the safe working load (SWL)

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**Section 10: Mooring Operation**

Fairlead rollers, rollers free to move

Windlass, anchors, cables, etc in good condition

**Section 10: Mooring Operation**

Anchors secured tightly in Hawse pipe?

Bitter end securing arrangements accessible?

Chain locker manholes locked properly?

**Section 10: Mooring Operation**

Master aware of the limitations of anchoring equipment

Emergency towing booklet(ships constructed on/after 1<sup>st</sup> Jan 2010)

# Section 11: Radio and Communication



DSC operating instructions posted at GMDSS console a/w callsign and MMSI no.

Deck officer familiar with response during distress and emergencies



# NYK MARITIME COLLEGE

# Section 11: Radio and Communication



**Dedicated communication officer other than Master**

**GMDSS log is maintained a/w daily, weekly and monthly testing**

**NOTES:**

- 1) Daily test for the load and load should be made and where necessary, have it brought up to rated condition.

**DAILY:**

- 1) Daily test on the load or load should be made and where necessary, bring it up to rated condition.
- 2) Daily voltage checks.
- 3) Daily insulation resistance test without utilization of insulation tester.

**WEEKLY:**

**BATTERY:**

- 1) Monthly test by means of discharge volume procedure
- 2) Check the specific gravity of each battery cell, as there are **ABNORMALS**, test to see if the specific gravity of each cell is normal.
- 3) Measure the voltage of storage as far back from the source as the insulation resistance test.

**MONTHLY:**

**BATTERY:**

- 1) Monthly check for capacity of each battery unit and the condition of the battery terminals and their connections (check)
- 2) Monthly check for insulation resistance.

**YEARLY:**

**BATTERY:**

- 1) Once per year capacity test should be carried out using appropriate method. The date where source of energy consists of rechargeable accumulators must be noted.

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## Section 11: Radio and Communication



GMDSS radio batteries maintenance and battery log(record of annual capacity test in the port)



Comm. equipment in Form R of Safety  
radio cert. in good condition





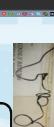
# Section 11: Radio and Communication

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ALRS updated

ICS and IAMSAR vol III available

Sufficient UHF, SART in good condition



# Section 11: Radio and Communication

Survival craft radio in good condition

AIS annual test(shore service record)

MSC.1/Circ.1252  
ANNEX

APPENDIX  
AUTOMATIC IDENTIFICATION SYSTEM (AIS) TEST REPORT

Name of ship / call sign:	OOWARI MARU / JEN203
MMSI number:	335 915 000
Port of registry:	7950000000
IMO Number:	9313830
Gross tonnage:	115,928

MANAGEMENT



# NYK Maritime College

## Section 11: Radio and Communication

### SBM(shore based maintenance agreement)

NYK FRONTIER 2000

Mobile Communication Service Agreement

This agreement is made  
BETWEEN NYK FRONTIER KANTO SHIJI KABINA  
Shipowner designated in the specification herein (hereinafter called the "Shipowner") on the one  
part,  
and  
MOOSI JAPAN CO., LTD., whose registered office is Yawata Hig.,  
1-5 Kagaoka, Nakano-ku, Yokohama 221-0024, JAPAN, its successor or assignee (hereinafter  
called the "Contractor") on the other part.

Whereas the Shipowner being the owner of radio station fitted board the ship named in the  
specification hereto has requested MOOSI to render the Radio-Communication service on the  
said ship which MOOSI has agreed to do in manner hereinafter appearing

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## Section 12: Security

- SSP approval letter
- Ship security drill, Ship/Shore annual drill
- Security watch maintained by a crew member permanently at gangway
- SSO trained and crew receive security training

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**NYK GROWTH**

## Section 12: Security

Crew member aware of name/contact details of the CSO

**Record of security activities**

**SSAS activation test**

**EMERGENCY MESSAGE**

To: ceo@nykms.com.sg, audie@nykms.com.sg,  
cc: emermsg@nykms.com.ng  
Date: 27/12/2015 10:42 AM  
Subject: SSAS ALERT MESSAGE

THIS IS SECURITY ALERT MESSAGE  
THE SHIP IS UNDER EMERGENCY  
CONTACT NUMBER : 00000000000000000000  
MMSI:323237000000  
CALL SIGN:N 9 D W

TEST TEST  
MES NO.435235710  
LAT:30.000000,LON:110.000000,TIME:12.97,UTC:27.12.2015 02:40:000,0.1KT,COO:54080

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## Section 12: Security

**HRA(high risk area) instructions**

**RA related to HRA transit**

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**NYK GROWTH**

## Section 12: Security

Inspection, test, operation and maintenance of security equipment

Stowaway prevention measures

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## Section 12: Security

**Cyber security policies and procedures**

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Control in use of media such as USB, CD etc.

Personal device usage with view of cyber security

**NYK GROWTH**

## Section 12: Security

Cybersecurity awareness material distribution to crew?

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# NYK SHIP MANAGEMENT



## Section 13: Machinery Space



NYK Maritime College

### Engineering procedures, instruction and guidelines included in the SMS?

Watch level matrix in E/R
---------------------------

Night order availability
--------------------------

A. Watch Levels / Job Description						
Job	Responsibilities (Overall level of charge)	Inspectors	Monitoring	Measurements	Alerts to alarm	Record keeping
WLevel1	Overall responsibility	Bridge	Monitoring of applicable Start/Stop Procedures	Measurements	Alerts to alarms	Record keeping
WLevel2	Chief Engineer	Bridge Supervisor				Sign off
WLevel3	Chief Engineer	Chief Engineer				Sign off

B. Minimum Watch Level - 1						
Captain	Responsible for safety	Bridge	Bridge	New Channels and Straits	In areas where Low Order Fuel is used for Steering	
Crew	Responsible for safety	Bridge	Bridge	New Channels and Straits	Main Engines (MEO) MEAO	
C. Minimum Watch Level - 2						
Entering Harbor	Leaving Harbor	Evaluation of Critical Aspects			Emergency Handling	

 **Section 13: Machinery Space** 



NYK Maritime

NYK SHIP MANAGEMENT

MS / S-P-07.10.05 UMS Operation

Version: 2019-08-01  
Approved By: Head of G-SMIC

4.6 Procedure for entry into Machinery Space (Engine Room)  
This section provides procedure for entry into engine room for UMS Operation during Unmanned Engine periods  
iii) If Patrolman alarm system (dead man alarm system) is fitted, system shall be turned ON immediately prior entry. On completion of work in engine room, ensure the system is switched OFF.

NYK SMS Manual (Rev. 2019-08-01) **Safety Checklist & Record – Non LNG** <S-071005-02CH>  
Page 1 of 1

**SAFETY CHECKLIST**  
**This checklist is to be completed, dated and signed by the Duty Engineer before going unmanned in the machinery spaces.**

(1) NAME / DATE      (Signature Witnessed)

**UMS being used?**

If UMS not used, is sufficient crew on-board?

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# Section 13: Machinery Space



Procedures related to Entry in E/R during UMS documented, posted and understood?



## Section 13: Machinery Space

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OVER INSPECTION & LOG BOOK

- Engineer call alarm system in good order
- E/R Log book maintained
- Procedures to recover essential equipment

**FO/ LO analysis result as compared to maker recommendation**

**SMS guidelines for dealing with catfines (Al+Si) in place and being followed?**

# Section 13: Machinery Space

Bunkering and oil transfer ops planned and executed according to SMS?



**Section 13: Machinery Space**

ECA area procedures in use(modifications in vessel piping and equipment is class approved?)

Ship specific procedures available for Fuel change over

**Section 13: Machinery Space**

PMS Usage

Critical equipment identified

**Section 13: Machinery Space**

Critical spares availability

Major ME and DG components maintenance and records of periodic maintenance

**Section 13: Machinery Space**

Emergency escape routes clearly marked, free of obstruction and adequately lit

E/R illumination level satisfactory

**Section 13: Machinery Space**

Emergency equipment tested, in good condition and result recorded

**Section 13: Machinery Space**

Q/C valves of fuel system being regularly tested

Emergency stop for E/R and Funnel vent fans tested

**Section 13: Machinery Space**

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High and low pressure fuel oil pipes jacketed



Engine exhaust/hot surfaces adequately shielded against oil spray



Exposed bellows-Bad condition



Exhaust bellows exposed

Broken jacket: Bad condition



[https://madenmaritime.files.wordpress.com/2014/12/risk\\_focus\\_\\_engine\\_room\\_fires.pdf](https://madenmaritime.files.wordpress.com/2014/12/risk_focus__engine_room_fires.pdf)

**Section 13: Machinery Space**

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Is lagging and insulation, free of any oil soaking?



Are purifier rooms, fuel and lubricating oil handling areas, ventilated, free of oil leaks and clean?



**Section 13: Machinery Space**

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Main engine bearing temperature monitors or the crankcase oil mist detector, in good order and regularly tested?(for UMS vessels)




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**Section 13: Machinery Space**

NYK Maritime College NYK GROUP

MSB, alternators and other electrical equipment protected from water spray?

**Section 13: Machinery Space**

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Are the main and emergency switchboards being surrounded by non-conducting mat and are the mats in good order?

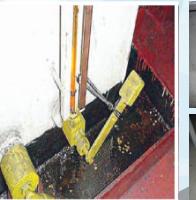



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**Section 13: Machinery Space**

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Are the self-closing valves and gauge glasses being maintained and in good order?


Self-closing gauge valve gripped with wire  
Self-closing gauge glass held open with string  
[https://madenmaritime.files.wordpress.com/2014/12/risk\\_focus\\_\\_engine\\_room\\_fires.pdf](https://madenmaritime.files.wordpress.com/2014/12/risk_focus__engine_room_fires.pdf)

**Section 13: Machinery Space**

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Where moving machinery presents a hazard, is it guarded effectively?

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**Section 13: Machinery Space**

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Are the protective guards, shields and emergency stop of the engine room workshop tools being maintained in good order?

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**Section 13: Machinery Space**

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Is the engine room crane and other lifting gear regularly inspected, tested and maintained?

2013/02/27 15:25

ClassNK

Report on inspection of lifting equipment and hoistage

Name of article:	MV OYAKI MARINE	CLASS: NK	Date: 2013-10-31
Model No.:	1000	Load test:	
Inspected by:	YUAN JIANG	Inspected at:	CHONGMING ISLAND
Tested by:	YUAN JIANG	Tested at:	CHONGMING ISLAND
Actual load tested:	22.0	Test load:	2013-10-30
Tested date:	2013-10-30	Checklist & certificate substituted:	

**Section 13: Machinery Space**

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Are all spare parts and loose gear in the machinery spaces, stores and steering compartment properly secured?

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**Section 13: Machinery Space**

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Standard of housekeeping in the machinery space and steering gear(clean and free from leaks?)

Bad condition

Good Condition

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**Section 13: Machinery Space**

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Are engine room bilges clean and free of oil and sediment?

Clean Bilges

Bad Condition-Oil accumulation

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**Section 13: Machinery Space**

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Is the bilge high level alarm system regularly tested, in good order and are records of test maintained?



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**Section 13: Machinery Space**

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Are the sea chest, seawater pumps and related sea water lines, in good order, free of hard rust and temporary repairs?



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**Section 13: Machinery Space**

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Any defect in other machinery

Pipes in good condition and free of patches



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**Section 13: Machinery Space**

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Local maneuvering operation



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Procedures for 'ME Machine side Operation'

- PREPARATION
  - From Main Switch, Change main switch to 'BTS'.
  - Relieving the pressure of the air cylinder and the engine.
  - Open the valve to vent air cylinder and the engine.
  - Turn the handle to a counter clockwise direction to free the coupling ring wheel (R).
- The bedding area (D) has maneuver position.
- Operate the lever to support hand (C) counter clockwise for the bedding area (D).



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**Section 13: Machinery Space**

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Are crew familiar with the starting procedure for the emergency generator and how to put power on the emergency switch board?



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Work instructions: WIS-C001 Procedure for Black-out response Rev. No. 1  
Issue date: 25 Jan 2014 Preparation: CE Approvability: CE To be stored in the safe place

CASE: Black-out response

When a Black Out occurs, the Engineers are to immediately take the following countermeasures:

- Procedure for recovery
  - Report the Black Out to the Chief Engineer by telephone on Engine Call. Standby.
  - Call for the Marine engine automatically started.
  - The SDCS and Emergency Generator are automatically started.
  - The SDCS of the UG DG automatically starts. Then the Electric Power is restored.
  - The Emergency Generator automatically synchronizes with the electric load of the ship's electrical system.

**Section 13: Machinery Space**

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If the starting source of the emergency generator relies on a single starter motor, has a spare starter motor been provided?



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## Section 13: Machinery Space



Is the reserve fuel tank of the emergency generator filled with sufficient fuel of a suitable type for at least 18 hours operation?



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## Section 13: Machinery Space



If an emergency generator is not fitted, are engine room emergency batteries in good order, fully charged and capable of supply the designed power load up to minimum 18 hours?



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## Section 13: Machinery Space



Is the earth fault monitoring equipment of the main and emergency switchboards operational and are they free of faults?



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## Section 13: Machinery Space



Is the emergency steering gear drill being carried out every three months?



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## Section 13: Machinery Space



Is a heading indicator and communication system provided in the steering gear room and are they in good order?



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## Section 13: Machinery Space



Is the emergency steering position rudder angle indicator in good order and clearly marked in red and green?



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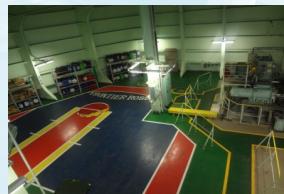
## Section 13: Machinery Space

Is the steering gear compartment clear of obstructions and moving equipment?



## Section 13: Machinery Space

Are suitable handrails, gratings or other non-slip surfaces being provided for the steering gear compartment?



## Section 14: General Appearance- Hull and Superstructure

Is the ship's hull, clean, free of significant corrosion, extensive coating breakdown and marine growth?



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## Section 14: General Appearance- Hull and Superstructure

Are followings permanent marking on the ship's hull, where applicable, plainly visible and painted in a contrasting colour?

- The vessel's name;
- Port of registry;
- Loadlines;



Bad Condition



## Section 14: General Appearance- Hull and Superstructure

Draft marks

Thruster warnings

Tug push points

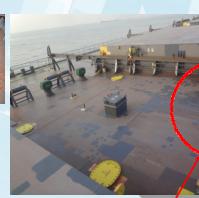
IMO number

Bulbous bow mark



## Section 14: General Appearance- Hull and Superstructure

Are the weather decks satisfactory, free of loose rust scale and maintained in a satisfactory condition?



Poor Condition

Good Condition

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## Section 14: General Appearance Hull and Superstructure

**NYK GRO**

Have the working areas on weather decks been clearly identified and protected with nonslip surface?



NYK SHIPMANAGEMENT F



## Section 14: General Appearance- Hull and Superstructure

**NYK GRO**

Are the clamps, supports and expansion joints arrangements of deck pipework satisfactory?



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## Section 14: General Appearance- Hull and Superstructure

**NYK GRO**

Are the vents and air pipes on weather decks maintained in good order and are they clearly marked to indicate the compartment they serve?



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## Section 14: General Appearance- Hull and Superstructure

**NYK GRO**

Are the pipes on deck, free of significant corrosion, pitting, soft patches or temporary repair and maintained in good condition?



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## Section 14: General Appearance- Hull and Superstructure

**NYK GRO****NYK GRO**

Are all the watertight doors, weathertight doors and portholes, maintained in good order?



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## Section 14: General Appearance- Hull and Superstructure

**NYK GRO**

Is the cosmetic appearance of the superstructure satisfactory?



Are the hatch numbers being clearly indicated and correctly placed



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## Section 14: General Appearance Hull and Superstructure

Are the deck lights, emergency lights and hold lights (where fitted) in good order?



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## Section 14: General Appearance Hull and Superstructure

Is the condition of electrical equipment including, switches, sockets, junction boxes, plugs conduits and wiring on weather decks satisfactory?



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## Section 14: General Appearance Hull and Superstructure

Are the explosion proof lights in paint lockers, acetylene stores or similar spaces, in good condition?



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## Section 14: General Appearance Hull and Superstructure

Are the stores located inside the accommodation and on the weather decks clean and tidy?



Untidy condition

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## Section 14: General Appearance Hull and Superstructure

Are the levels of housekeeping and hygiene inside the accommodation satisfactory?



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## Section 14: General Appearance Hull and Superstructure

Are dryers inside the laundries clear of any build up of lint?



[https://www.reddit.com/r/LifeProTips/comments/3gjkn/lpt\\_empty\\_your\\_washing\\_machine\\_lint\\_collector/](https://www.reddit.com/r/LifeProTips/comments/3gjkn/lpt_empty_your_washing_machine_lint_collector/)

Source: myhomeinspectiontraining.com

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**Section 14: General Appearance- Hull and Superstructure**

Are galley appliances, audio-visual equipment and other electrical equipment inside the accommodation in good order?

**Section 14: General Appearance- Hull and Superstructure**

Is the refrigerated space alarm system in good order?

**Section 14: General Appearance- Hull and Superstructure**

Is the elevator, where fitted inspected, tested and in good order?

**Section 14: General Appearance- Hull and Superstructure**

If provided, is the ship's hospital clean and hygienic and for medical use only?

Poor condition of hospital

**Section 15: Health and Welfare of Seafarers**

Do the Seafarer Employment Agreements (SEA) complies with the requirement of MLC 2006?

**Section 15: Health and Welfare of Seafarers**

Are the accommodation spaces safe, provided to a respectable level of health and hygiene and regularly inspected, including checks of ventilation, noise, heating, lighting and sanitation?

 **Section 15: Health and Welfare of Seafarers** 

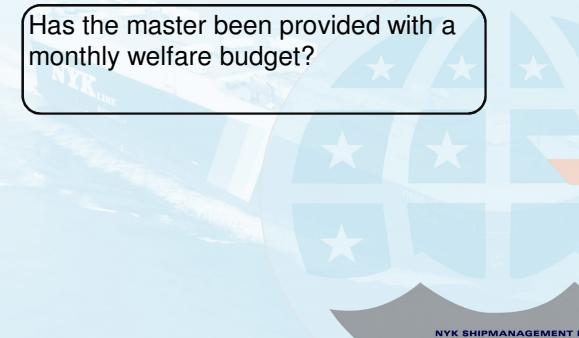
Are ship's staff provided with adequate recreation facilities on board the ship?



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 **Section 15: Health and Welfare of Seafarers** 

Has the master been provided with a monthly welfare budget?



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 **Section 15: Health and Welfare of Seafarers** 

Are seafarers being provided with sufficient quantities of food and water free of charge and does the cook hold appropriate qualifications?



<https://pt.depositphotos.com/16473032/> <https://stocksnap.io/search/food>

NYK SHIPMANAGEMENT

 **Section 15: Health and Welfare of Seafarers** 

Is a procedure in place for monitoring and ensuring the quality of potable water and is there recorded evidence of regular testing?



DREW MARINE TECHNICAL SERVICE PROGRAM  
SERVICE REPORT MSH-2

Drew Marine

GENERAL DATA

Comments & Recommendations

NYK SHIPMANAGEMENT

 **Section 15: Health and Welfare of Seafarers** 

Are ship's staff provided appropriate medical care and health promotion programmes?



NYK SHIPMANAGEMENT PTE LTD  
Health Safety Bulletin Feb 2019

Burn Injury

BurnScaling can be very painful

HSEQ Circular

NYK SHIPMANAGEMENT

 **Section 15: Health and Welfare of Seafarers** 

Is there evidence to confirm that visits to a qualified medical doctor or dentist have been arranged without delay in ports of call, where required?



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Ship Master's Report Form (GENERAL)

Ship Master's Report Form (MEDICAL)

Ship Master's Report Form (DENTAL)

Injury or Illness Report (From Ship)

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## Section 15: Health and Welfare of Seafarers

Are individual monthly statements provided to all seafarer on board, detailing their monthly wage and any authorised deductions such as allotments?

NYK SHIPMANAGEMENT PTE LTD  
Monthly Accounts Report (v6.0)

The flowchart shows the process from Register Cash Advance to Payment of Wages and Accruals of Seafarers.

Month	Wage	Accruals	Other Deductions	Total Deduction	Net Wage
Jan	\$1,000	\$100	\$50	\$150	\$850
Feb	\$1,000	\$100	\$50	\$150	\$850
Mar	\$1,000	\$100	\$50	\$150	\$850
Apr	\$1,000	\$100	\$50	\$150	\$850
May	\$1,000	\$100	\$50	\$150	\$850
Jun	\$1,000	\$100	\$50	\$150	\$850
Jul	\$1,000	\$100	\$50	\$150	\$850
Aug	\$1,000	\$100	\$50	\$150	\$850
Sep	\$1,000	\$100	\$50	\$150	\$850
Oct	\$1,000	\$100	\$50	\$150	\$850
Nov	\$1,000	\$100	\$50	\$150	\$850
Dec	\$1,000	\$100	\$50	\$150	\$850

**NYK Maritime College**

## Section 15: Health and Welfare of Seafarers

Are measures in place to address Occupational Health and Safety (OHS) risks?

NiBiKi  
SMS / S-P-09.40.03 Crew Health and Medicine Management

The flowchart shows the process from Scope to Responsibility.

Hazard	Severity	Probability	Risk
Illness	Medium	Medium	Medium
Injury	Medium	Medium	Medium
Death	High	Medium	High

**NYK Maritime College**

## Section 15: Health and Welfare of Seafarers

Do seafarers have access to shore-based welfare facilities?

NYK SHIPMANAGEMENT PTE LTD  
CIM-CIM-09DSP-03 Harassment and Bullying

The flowchart shows the process from Scope to Purpose.

Hazard	Severity	Probability	Risk
Harassment	Medium	Medium	Medium
Bullying	Medium	Medium	Medium

**NYK Maritime College**

## Section 15: Health and Welfare of Seafarers

Does the SMS include a policy on Harassment and Bullying, and are all seafarers aware of it?

NiBiKi  
CIM-CIM-09DSP-03 Harassment and Bullying

The flowchart shows the process from Scope to Purpose.

Hazard	Severity	Probability	Risk
Harassment	Medium	Medium	Medium
Bullying	Medium	Medium	Medium

**NYK Maritime College**

## Section 15: Health and Welfare of Seafarers

Is there a complaints procedure on board and are seafarers aware of this procedure?

NYK SHIPMANAGEMENT PTE LTD  
CIM / CIM-09CMP-01 On-Board Complaint Handling Procedure

The flowchart shows the process from Scope to Purpose.

Hazard	Severity	Probability	Risk
Complaints	Medium	Medium	Medium

**NYK Maritime College**

## What happens after a Rightship Inspection?

Sample Observation list → Vetting Inspector Submits the list of observations to the RightShip with in 72hours → Vessel Manager prepares a corrective action plan in consultation with vessel and HSEQ department and submits to RightShip with in 15days of inspection → Vessel submits NCD to VM.

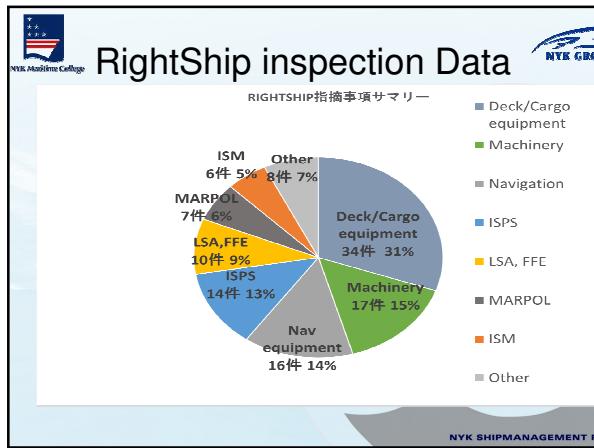
Sample CAP

Vetting Inspector gives an observation list to vessel prior his disembarkation

Upon RightShip acceptance of CAP, a rating adjustment is done by the RightShip

Vessel Manager prepares a corrective action plan in consultation with vessel and HSEQ department and submits to RightShip with in 15days of inspection

Vessel submits NCD to VM



# PORT STATE CONTROL



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## What is a Port State Control Inspection?

The inspection of **FOREIGN** ships in **NATIONAL** ports to verify that the condition of the ship and its **equipment comply** with the requirements of international regulations and that the ship is **manned and operated** in compliance with these rules.



( Links : Courtesy Paris MOU)

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## What is inspected during a PSC Inspection?

Compliance with the following regulations is verified during inspections

- 1) SOLAS
- 2) International Load line Convention
- 3) Marpol
- 4) STCW
- 5) Colregs



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## Port State Control



### Who is the Inspector ?

Inspections are carried out by the country in which the port is located.



### Why carry out Inspection ?

Confirmation that the competency of the master and officers on board, and the condition of the ship and its equipment comply with the requirements of international conventions (e.g. SOLAS, MARPOL, STCW, etc.) and that the vessel is manned and operated in compliance with applicable international law.

### What will happen if vessel fails the inspection?

PSC inspector has the power detain a vessel until noted deficiencies are rectified.

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Sub – Standard Ships are,

**Detained in Port till deficiencies are rectified**  
**Or**  
**Banned from visiting ports altogether**  
**Or**  
**Scrapped from Sea service.**



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- 6) International Tonnage Convention
- 7) ISM Code
- 8) ILO 147
- 9) IBC Code
- 10) IGC Code
- 11) IMO Res. A. 787(19)



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## Why the need for PSC?

Some **Flag states** and **Classification Societies** (also termed RO-Recognized Organisation) are **failing to fulfill their commitment** as per International Legal Instruments and subsequently some ships are sailing in an unsafe condition, threatening lives as well as the marine environment.



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## How does the PSC Mechanism operate?



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## MOU

- Group of Regional Coastal States come together commonly called MOU – Memorandum of Understanding
- These **groups of coastal states** agree to implement a **harmonized system** of port state control



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## MOU

- The MOU consists of a Main Body and annexes where the authorities agree on:
  - Their commitments and **the relevant international regulations**.
  - The **inspection procedures** and the investigation of operational procedures.
  - The **exchange of information**.
  - The **structure of the organisation** and amendment procedures.

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A code of Good practice provides guidelines regarding the standards of integrity, professionalism, and transparency for all Inspectors carrying out Inspections under the PSC regime.



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## MOU AREAS



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## Implementation of PSC Inspections



Through an establishment of Regional PSC Organizations (commonly called MoU's) covering all of the worlds oceans

### 1) Paris Mou (Europe and North Atlantic) -

Belgium, Bulgaria, Canada, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Sweden, United Kingdom.



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### 4) Caribbean Mou (Caribbean Region) -

Antigua & Barbuda, Belize, Barbados, Dominica, Grenada, Guyana, Jamaica, the Netherlands Antilles, Suriname and Trinidad and Tobago.



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### 5) Abuja Mou (West and Central Africa) -

Angola, Benin, Cameroon, Cape Verde, Congo, Cote d' Ivoire, Gabon, Ghana, Guinea, Equatorial Guinea, Liberia, Mauritania, Namibia, Nigeria, Senegal, Sierra Leone, South Africa, São Tomé and Príncipe, Democratic Republic of Congo, Guinea Bissau, The Gambia, and Togo



### 8) Indian Ocean Mou (Indian Ocean Region) -

Australia, Bangladesh, Djibouti, Eritrea, France (La Reunion Island), India, Iran, Kenya, Maldives, Mauritius, Mozambique, Myanmar, Oman, Seychelles, South Africa, Sri Lanka, Sudan, Tanzania, Yemen.



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### 9) Riyadh Mou (Gulf Region) -

Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE



### 2) Tokyo Mou (Asia and Pacific) -

Australia, Canada, Chile, China, Fiji, Hong Kong, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Papua New Guinea, The Philippines, The Russian Federation, Singapore, Thailand, Vanuatu and Vietnam.



### 3) Acuerdo de Vina del Mar Agreement (Latin America) -

Argentina, Bolivia, Brazil, Colombia, Chile, Cuba, Ecuador, Honduras, Mexico, Panama, Peru, Uruguay and Venezuela.



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### 6) Black Sea Mou (Black Sea Region) -

Bulgaria, Georgia, Romania, Russian Federation, Turkey and Ukraine.



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### 7) Mediterranean Mou (Mediterranean Sea Region)

Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Tunisia and Turkey.



### Drills and Crew Training

- Some Inspectors (USCG) would also need the vessel to conduct a drill to assess crew preparedness for emergencies.



- Recently one of our vessels was detained by PSC after repeatedly failing to satisfactorily carry out a fire drill in 2 successive attempts (Case Study ).

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**Fire Drills**

- When scenarios for fire drills are prepared, consider vessel specific situations to create a practical plan for fire fighting.
- Include surprise/random changes/additions to the drill to improve crew response and skills.
- Carry out a critical de-briefing after drills, note all shortcomings and carry out a training session to cover all defects.
- Ensure Fire-fighting equipment is kept in **operational readiness** at all times



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**Time the Drills**



- Time the drills e.g. time to muster, time for lowering lifeboats (USCG gives 3-5mins for lowering lifeboats to embarkation deck), etc as some PSC legislations monitor the time factor too.



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**Training and Contingency Planning**

- In addition impart training to all crew members in use and operation of all emergency systems. It is known for some inspectors asking the Ch.Cook to start lifeboat engines.
- Officers should be thoroughly familiar with the use of all fixed fire extinguishing systems.
- Prepare contingency plans which include alternate mustering stations and backup routes for entry and exit wherever possible.



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**Fire Pump Testing**

- Ensure Fire pumps and emergency fire pumps are tried out with requisite pressure generated from fire hoses/foam turrets on deck at farthest points.




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**Types of Inspections by PSC regime**



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**Initial Inspection**

- An Initial Inspection will consist of a visit on board to:
- Check the ships certificates and documents
- Check that the overall condition and hygiene of the ship including
  - Navigation Bridge
  - Accommodation and Galley
  - Decks including forecastle
  - Cargo holds/area
  - Engine room meets generally accepted international rules and standards
- Verify whether any deficiencies from previous inspections have been rectified within the time limit specified in the report.



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**Some examples of High Risk Areas on Vessels**

- Hatch Covers
- Cargo Holds, WIAS, Tank top condition, hold condition
- Hold Vents
- Deck
- Pipelines
- LSA, FFA, Dampers, fire detection

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- Findings related to competence of officers, crew training and emergency preparedness
- Any finding on Steering gear system, alarm system, oil leak, OWS housekeeping.
- Breach of company D&A policy, low standard of housekeeping resulting in safety issues to the vessel.

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**Common observations from Initial Inspection**

- Expired Licenses, certificates
- Absence of Flag Licenses
- Poor Housekeeping
- Dirty Engine rooms
- Poorly marked voyage charts
- Crew members unable to converse in "Working language" of the vessel.
- Fault alarms of fire panel
- Faults in Fixed Fire Fighting System.

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**Detailed Inspection**

- Carried out whenever there are **Clear Grounds** for believing during an inspection that the **Condition of the ship** or its **Equipment** or **Crew** does not substantially meet the requirements of a relevant instrument.
- If the PSC officer finds evidence which, in his professional judgement warrants a more detailed inspection then **Clear Grounds** are said to exist.

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**Some examples  
of  
CLEAR GROUNDS !**

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### Clear Grounds for Detailed Inspections

- Crew members unable to communicate appropriately with each other or the ship with the shore based authorities in a common language
- Certificate has been fraudulently obtained or the holder of the certificate is not the person to whom the certificate was originally issued.
- Evidence of cargo or other operations not being conducted safely or in accordance with IMO guidelines.
- Absence of updated Muster list or crew members not aware of duties in the event of a fire or an order to abandon ship.

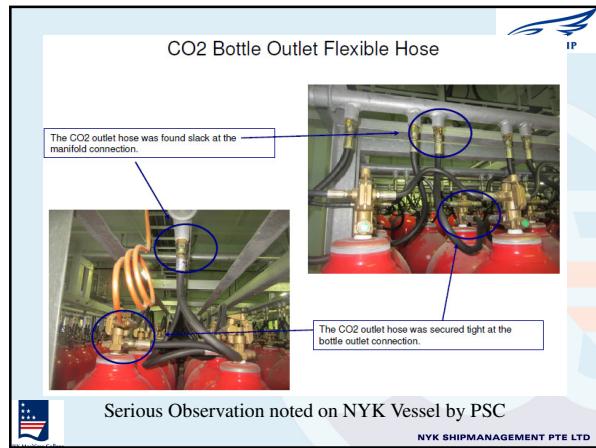
### Clear Grounds (cont'd)

- The emission of false distress alerts not followed by proper cancellation.
- Evidence from the PSCO's general impressions that serious hull or structural deterioration exist that may put the ship at risk.
- Excessively unsanitary conditions on board the ship.
- Evidence that Master or crew not familiar with essential shipboard operations.
- The absence of a table of shipboard working arrangements or record of hours of work or rest of seafarers.

### Concentrated Inspection Campaigns

- Restricted to ports within a MOU region.
- Campaigns usually last for 3 months
- Information regarding CIC is disseminated to shipping in advance so that visiting ships are well prepared for the inspections
- If frequent failings are noted in particular areas of shipboard compliance then CIC's are initiated by MOU's for that particular area.
- Specific areas targeted are e.g. GMDSS, Damage Stability, Fire Systems, etc

### Some Detainable deficiencies noted on vessels during PSC Inspections





As a result of strict measures taken by  
Port State Control

Most of the ships you have just seen have  
already been scrapped or are banned from port  
visits this year.

Some images are courtesy of Paris MOU.

### What will happen as a Result of PSC?

Port State Control is a System of  
Harmonized Inspection procedures designed to  
**target Sub-Standard ships**  
with the main objective being the eventual  
**elimination of such ships.**

**Elimination is brought about by detention, banning,  
scrapping of old vessels.**

Port States will also ensure their own  
**Coastlines, Facilities and Resources**  
are protected from  
**High Risk and Unseaworthy Ships**  
which pose a  
**Hazard to Safety and Environment**

### After a PSC Inspection

- PSC Inspector will issue vessel a Report of Inspection  
[Form A](#).
- A Clean Inspection report, Form A is issued to the vessel  
if no deficiencies are noted.

- If deficiencies are identified, [Form B](#) will also be given  
to the vessel which:
  - Includes a report of deficiencies found.
  - Details the deficiencies noted along with the PSC Codes
  - The follow up actions to be taken to rectify the  
deficiencies noted.
  - It also denotes the status of the vessel.

### Case Study of “M.V. Huanghai Developer”

Click on the Link Below



[Caught in the net](#)

Courtesy “Paris MOU”

**Action taken by a PSC Inspector after Inspection (in order of ascending gravity)**

- In case any detainable deficiencies are noted then the inspector may:
- Request for deficiencies to be rectified within 14 days
- Under specific conditions deficiencies can be rectified when the ship arrives at the next port
- Request for deficiencies to be rectified before the ship can depart the port
- Detain the ship



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**Criteria for Detention**

- Ship unsafe to proceed to sea, irrespective of the time the ship is scheduled to stay in port
- Ship having serious deficiencies which will need to be rectified before the vessel sails.



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NYKSM has formulated following checklists, to be used whenever a Port State Control inspection is expected - especially at **Australian** and **Chinese** Ports

Vessel are requested to advise company of any shortcomings pertaining to the checklists (Refer circular HSEQ/ALL/039/15)



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**Class NK advisory on List of deficiencies by PSC, as per regions**

**Refer: HSEQ/ALL/104/16 PSC inspection reports of Class NK & NK-SMC ships**




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**Some Common items giving rise to deficiencies and subsequent detentions**

Courtesy AMSA



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**Hours of Rest and Fatigue**

- Beyond the scope of an initial inspection, checks of log books are supplemented by verbal queries with watchkeepers.
- These checks have been intensified as a result of incidents attributed to insufficient rest periods of seafarers



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## Life Saving Appliances

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- Account for around 22% of all detentions
- Incorrect maintenance of hook release systems



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- Hydrostatic Interlocks not in normal position
- Override Indicators in danger area




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- Cabling connections between Hydrostatic unit and Interlock damaged by rust, wastage – resulting in only one hook being released, or different release timings for both hooks



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- Loose or missing cable clamps allowing the cable to move relative to the release lever with end result of **different timing of release** of both hooks.



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- Individual components need to be well maintained.
- Excessive force for re-setting can lead to deformation.



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### Routine checks expected for lifeboat maintenance:

- Lifeboat secured properly.
- Lifeboat release hooks reset properly and indicators, where fitted, show correct position.
- Lifeboat release operating lever locked and reset properly.
- Lifeboat release interlock arrangements locked and reset properly.
- Lifeboat release indicators clear and in correct position.
- Lifeboat release instructions fitted within boat and crew aware of correct operation.
- Crew aware of routine maintenance requirements and this carried out in accordance with manufacturers instructions.
- Lifeboat painter release operable

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**Routine checks expected for lifeboat engines and steering:**

- Lifeboat engine sufficient fuel and de-watered as necessary.
- Lifeboat engine able to be started.
- Lifeboat propulsion able to be run ahead and astern.
- Lifeboat engine starting batteries maintained and in good condition.
- Lifeboat engine operation understood and able to be demonstrated by crew.
- Lifeboat means of steering, main and emergency able to be demonstrated.



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**Fire Fighting Equipment**

- Account for around 26% of all detentions
- Defective Fire Dampers – restricted movement during operation, holed, improper closing/sealing.




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- Emergency fire pumps, fire mains and isolating valves.
- Failure of emergency fire pump to pressurize the fire main line.
- Operation of emergency fire pump in all conditions of loading, discharging, ballasting.
- Usually, leaking fire hoses, fire mains and isolation valves are all grounds for detention




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**Marpol: OWS**

- Account for around 4% of all detentions
- Inaccurate entries in Oil Record Book
- Failure of alarm when the ppm is exceeded
- Incorrect indication of oil in discharge even when fresh water is being pumped out
- Failure of stopping device or recirculating valve
- Any findings as above can cause the vessel to be detained



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**Communications Equipment**

- Account for around 12% of all detentions
- Failure of MF/HF, Inmarsat, or VHF DSC testing with appropriate response
- Unable to Test with secondary source of power.
- Records of regular checks of EPIRB and other signaling equipment



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**The following tests are usually suggested for Communication<sup>UP</sup> Equipment for onboard maintenance:**

- Verify operation of MF/HF DSC by test call, including acknowledgment – maintain a record.
- Verify operation of VHF DSC by test call to second unit – maintain record.
- Verify operation of Inmarsat C by link test – maintain record.
- Verify that correct Navarea is selected for reception of MSI – maintain record.
- Verify operation of all equipment on reserve source of power.
- Maintain radio installation and power supply in proper condition.
- Ensure training and familiarization with equipment is given as appropriate.
- Ensure 406MHz EPIRB is stored appropriately, routinely tested and ready for use.



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## Emergency Generators



Demonstration of emergency generator.

Usually a no-load start, either manual or auto-start based on a simulated black-out condition.

Following checks recommended:

- Emergency generator and associated starting batteries maintained.
- Testing of the emergency power system routinely tested.
- Testing requirements of the emergency power system included in safety management system.
- Appropriate crew trained and familiarized with emergency power supplies.
- When running, verify that generator supplies appropriate voltage and frequency



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## Loadline



- Account for around 12% of all detentions
- Self closing arrangements on air pipes found defective



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## ISM and SMS deficiencies



- Account for around 13% of all deficiencies
- Lack of effective maintenance
- Ineffective corrective action
- Lack of emergency preparedness
- Lack of compliance with mandatory rules regulations



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## What does the Master do in case of a detention?



- Forward a copy of the PSC Inspection Report Form A & Form B to the Flag state/Class as soon as detention orders are issued.
- Also Inform ship owners/managers and cargo interests.
- The Class Surveyor communicates and cooperates with the PSC Inspector to expedite the release of the ship

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- 
- The class surveyor can offer an acceptable mechanism (condition of class) for following up on outstanding deficiencies that cannot be rectified before the vessel departs the port.
  - Owner/operator of the ship has a right to appeal against the detention. Appeals are made to Flag state which will consider the detention and approach the Port State.

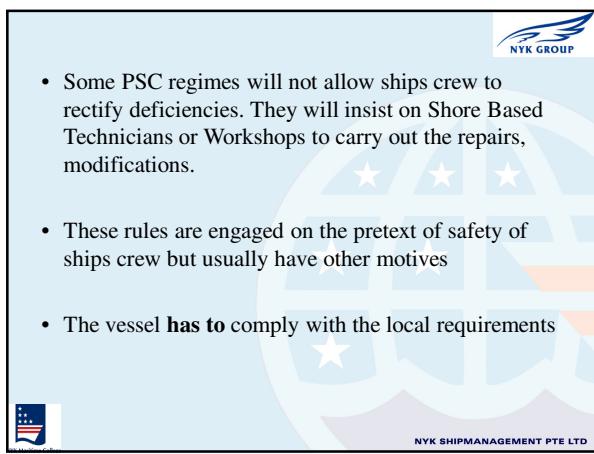


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- 
- Sometimes shore support may be necessary to rectify the deficiencies and therefore company assistance will be needed
  - If a ship is detained, all costs accrued by Port State to inspect the ship will be charged to the owner or operator or to his representative in the Port state.
  - As soon as deficiency is rectified the Port State should be requested for a re-inspection along with documentary evidence of the rectification.

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- Some PSC regimes will not allow ships crew to rectify deficiencies. They will insist on Shore Based Technicians or Workshops to carry out the repairs, modifications.
  - These rules are engaged on the pretext of safety of ships crew but usually have other motives
  - The vessel **has to** comply with the local requirements

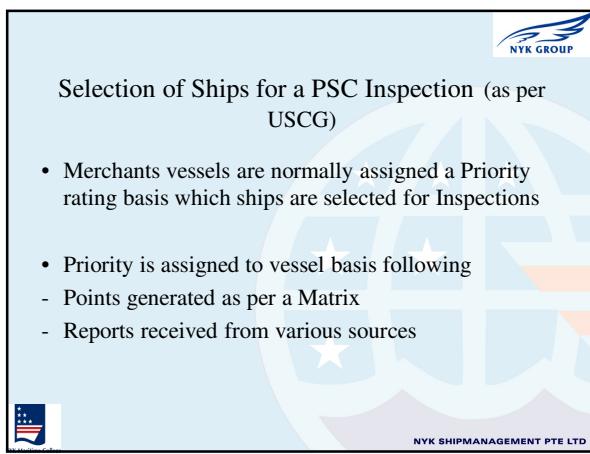


- In case of Port State Control Inspections Form A will be issued to the vessel. In case of a detention Form B will also be issued.

REPORT OF INSPECTION IN ACCORDANCE WITH IMO PORT STATE CONTROL PROCEDURES									
DFO B20-21A, CARRIERS ACT 1982, AUSTRALIA - Contract Number 10400001 - Phone: +61 2 6234 0000 - Fax: +61 2 6234 0001 - Email: dfo@oceans.gov.au									
1	NAME	Australia	N	NAME OF	C41-LINER POKE		2	REGISTRY	GERMANY
2	NAME OF VESSEL		3	NAME OF OWNER	EVERTS	4	IMO NUMBER	2100 8561650	
3	OWNER	(S) P.O. BOX 100	5	PORT OF REGISTER	ROTTERDAM	6	DATE OF INSPECTION	13.09.2012	
7	FLAG STATE	28377	8	DECK LOG NUMBER	4505	9	PERIODIC INSPECTION		
10	OWNER ADDRESS	Port Headland, WA, AUSTRALIA	11	PORT HEADLAND		12	CHIEF OFFICER	Hoppe Kai Katalin (NED)	
13	IMO NUMBER	9103819	14	PORT STATE CONTROL		15	CHIEF OFFICER SIGNATURE		
16	REASON FOR INSPECTION			TO CHECK IF THE VESSEL MEETS THE REQUIREMENTS OF THE MARITIME DOCUMENTS IT CARRIES					
17	REMARKS			NOTES MADE DURING INSPECTION					
18	RECOMMENDATIONS			RECOMMENDATION					
19	INSPECTOR SIGNATURE			SIGNED BY: ROY NIBALA					
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21	INSPECTOR POSITION								
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## Selection of Ships for a PSC Inspection (as per USCG)

- Merchants vessels are normally assigned a Priority rating basis which ships are selected for Inspections
  - Priority is assigned to vessel basis following
    - Points generated as per a Matrix
    - Reports received from various sources



**THANK YOU!!!**

## Q & A ?





	<b>Bulker Operation Manual / BLK-07OPM- 01 Operations and Maintenance</b>	Version: 2018.08.01 Approved By: Head of G-SMSC
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## 1. Purpose

This chapter provides the guidelines of hatch cover maintenance.

## 2. Responsibility

### Ship

Master shall ensure hatch cover maintenance are carried out basis on the guidelines provided.

### Shore

Monitor the maintenance of hatch covers. Ensure officers are properly trained with the use of hydrometers.

## 3. Procedure

### Hatch Covers Maintenance Guidelines

#### 3.1.1

Hatch Cover Panels - Corrosion reduces the strength of a hatch cover. Accelerated pitting corrosion leads to holes in the top plate. Hatch covers and coamings, including coaming support brackets should be well painted and free from significant corrosion, cracks and distortion.

During the Inspection look for the following:

- a) Holes and permanent distortion in the plating.
- b) Distortion of beams and/or stiffeners on the underside of the top plate.
- c) Cracks at coaming corners.
- d) Corrosion around welded connections of beams or stiffeners.
- e) Cracking of connecting joints and welds.

#### 3.1.2

Sealing Arrangements - The 'Rubber seal', which is also known as the 'Rubber gasket' or 'Rubber packing' or 'Hatch Rubber' is the single most important component in the hatch cover system. Rubber seals can be normally expected to last for about four to five years of normal service. They should be replaced when the permanent set reaches approximately 75% of the designed compression.

During the Inspection look for the following:

- a) The Rubber seal is kept clean & free from paint.



b) The Rubber seal is not physically damaged, or permanently set-in, or aged.

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... places, including the cross joints.

- c) Channel containing the Rubber seal is corrosion free.
- c) Compression bars are straight, not damaged and corrosion free.

f) Drainage channels are free of loose scale or cargo residues and Drain holes are not blocked. They can be cleaned with compressed air.

g) Non-Return valves are an essential feature of the hatch double drainage system. They let water that has come through the hatch cover drain away but stop water from the deck entering the hold. Damaged, missing or defective non-return drain valves should be repaired or renewed. Chalk test should be carried out on compression bars to check if compression is adequate.

### 3.1.3

Clamping Devices, Retaining bars & Hatch Cleats - Cleats & Wedges hold the hatch in position. Cleats are fitted with a rubber washer to aid compression. Compression of the washer determines tension in the cleat.

During Inspection look for the following:

- a) Compression Washers fitted on the cleats are not physically damaged and hardened due to age.
- b) Locking nut at the bottom of the cleats for adjusting compression is set in correct position and its threads are free and greased.
- c) Cleat rod is not bent or distorted and there is no wastage of the rod or the cleat snug where it sits.

### 3.1.4

Closed cover locating devices (Locators) - Virtually all types of hatch covers have restraints or locators fitted to them to absorb longitudinal and athwartships forces which they will experience due to ship motions at sea. The difficulty is that the hatch opening does not generally stay in a flat rectangular shape when the ship is acting in a seaway – it twists and stretches back and forth. The intention is for the locators to keep the seals and the hatch cover in the correct alignment with the compression bar / coaming. But there must be enough clearance in the locators to avoid the hatch covers picking up main hull forces when the ship is moving at sea.

During Inspection check for the following:

Distortion of Locators, clearances in locators & attachment of locators

### 3.1.5

Chain or Wire rope pulleys - Pulleys shall be well greased and aligned in the direction of the Wire or Chain, in order to prevent their parting. Sheaves should be replaced when the wear in the groove is equal to or greater than 20% of the wire rope diameter.

### 3.1.6



Guides, Landing Pads - Hatch sealing is arranged by design to give the correct compression of the gasket when there is metal-



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Worn landing pads will damage the Rubber seals and cause leakage. When newly fitted and closed in the sea position, the top plates of adjacent hatch panels should be level. Any deviation from level is an indication of landing pad wear or permanent distortion. If noted, it should be repaired immediately.



### 3.1.7

Guide Rails. Trackway & Hatch wheels - Hatch wheels should align squarely with the hatch trackway. If the wheel spindle is worn the wheel will loll (wobble). If it does, repair immediately. Hatch wheel spindles and bearings (where fitted) need to be greased regularly. Check the wheel spindle for wear and the wheel housing for physical damage. Repair if the wheels are out of alignment.

Trackways can corrode. They are weakened by abrasive wear and tear. When weakened, trackways can distort and break, affecting hatch movement and alignment. Trackway's should be free of loose scale and cargo residues. Surface of trackway shall be even so as to facilitate smooth movement of the hatch wheels. Trackways shall be kept clean and painted.

### 3.1.8

Stoppers - End stoppers (End stop pads) prevent hatch panels from overrunning when hatches are fully open. Look for physical damage, cracks & wastage.

### 3.1.9

Wires, Chains, Tensioners & Gypsies - Wires should be free of kinks or broken strands. Replace damaged or worn wires. Use extreme care when handling wires to avoid injury. Wires should be inspected before every operation

Replacement should be in accordance with manufacturer's instructions, usually based on criteria such as number of broken strands, reduction in diameter or physical deformation.

Drive chains and associated equipment are fitted in pairs, opposite one another. Adjust the tension of chains between panels so that the chains on both side are exactly the same length. Do this by removing or adding chain links. If the entire length of chain needs to be replaced, then replace the chains on both sides at the same time. As a rule, chain sag, measured from the assumed horizontal at mid-point along the chain, should be a fist wide. Gypsies should be free of leaks, greased and in good working condition.

### 3.1.10

Hydraulic Systems, Electrical Safety Devices, Interlocks - Check hydraulic systems for leakage. Cover piping with anti-corrosive tape or paint to avoid corrosion.



The cleanliness & viscosity of hydraulic oil must be checked.  
Samples should be periodically landed ashore for testing.



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Open and maintenance, refer to Service criteria.



Wear can be caused by cargo dust and residues which collect around hydraulic cylinder seals.

Cleaning of these residues is a good practice to avoid damage to the seals and prevent subsequent leaks.



### 3.1.11

End & Inter-panel hinges, pins & Stools (where fitted) - Look for wear of hinge pins, particularly at cross-joints and hydraulic cylinders. Worn hinge pins can cause hatches to slew and misalign at the cross-joints. Misaligned pan.

### 3.1.12

Emergency open / shut device of hatch cover.

Carry out testing of emergency hatch cover operations once every 6 months, and ensure crew are familiar with the operation.

## 4.

### Documentation

BLK-07BAL.04-01CHK HC Inspection and Maintenance Checklist

## 5.

### References

Nil

## Recent RightShip Findings

No.	Port of Inspection	Country	Code	Recommendation only (☒)	Code (Inspection Report)	Comment
1	POR HEDLAND	Australia	Working Spaces Acc Prev			Barricades not erected around the open manholes of the ballast tanks.
2	POR HEDLAND	Australia	Working Space Acc Prev			Discarded rags noted in purifier space and bunker tank save-all (Poop deck-starboard). Constitute a fire hazard.
3	POR HEDLAND	Australia	Working Space Acc Prev		4.3.5	MSDS for the chemicals not located in the compartment where the chemicals are stored.
4	POR HEDLAND	Australia	SOLAS - Maritime Safety Security		5.5	Pilot Ladder ropes looped at the bottom in contravention of SOLAS regulations.
5	POR HEDLAND	Australia	MARPOL I - Oil			No save- for, FO-1, FO-2 (P&S) sounding pipes.
6	POR HEDLAND	Australia	LSA			The restraints for the Free fall life-boat were not used before boarding the boat during the Abandon Ship Drill.
7	POR HEDLAND	Australia	FFA (* If Recommendation only)	☒		The deck fire line requires a fresh coat of red paint.
8	POR HEDLAND	Australia	FFA			Fire hose used at the fire drill was leaking at the nozzle end.
9	POR HEDLAND	Australia	Bulk Carriers - Additional Safety		4.7.1	Vessel's Cyber security and documentation is not in place.
10	POR HEDLAND	Australia	Bulk Carriers - Additional Safety		6.4.6	The vessel is not fitted with Ballast Water Treatment System.
11	POR HEDLAND	Australia	Bulk Carriers - Additional Safety			Hands free head-phones for use by helmsman not located in the Steering Room
12	POR HEDLAND	Australia	Accom, Food Catering	☒		Two tiles of the galley deck damaged.
13	POR HEDLAND	Australia	*Bulk Carriers - Additional Safety (* If Recommendation only)	☒	4.7.2	Vessel's Cybersecurity and documentation is not in place.
14	SHANGHAI	China	Mooring		5.4.11/5.4.18	After mooring winch (starboard side) brake linings were significantly thinned down at the brake band end areas.
15	SHANGHAI	China	Machinery	☒	3.6.2	Two electrical transformers fitted in the emergency generator room and one fitted in the E/R were not posted with IMO high voltage symbols/ stickers.
16	RIZHAO	China	Working Spaces Acc Prev	☒		It is recommended that the maximum & minimum angle and Maximum allowable number of persons to be stenciled on the upper and lower platforms of accommodation ladder and pilot gangway.
17	RIZHAO	China	Safety of Navigation	☒	7.3	Deck officers were not familiar with some operations of ECDIS, the adequate familiarization & training should be conducted to improve the understanding of its use for navigation.
18	RIZHAO	China	Mooring	☒		It is recommended that the rubber type heaving line monkey fist (containing steel material) to be removed/replaced.
19	RIZHAO	China	ISM	☒	4.7.2	It is recommended that the Cyber Security procedure to be established by the management company.
20	NANTONG	China	Stab, Structure Equip		5.4.18	The cover plates for hatch cover No.6 hydraulic pipes near the hatch cover control box on the cross deck was wasted and holed.
21	NANTONG	China	Stab, Structure Equip		5.3.11	The rungs and guard rails for the permanent inspection ladders inside the ballast tanks were found with excessive corrosion.
22	NANTONG	China	SOLAS - Maritime Safety Security		5.2.12	Recommended that the helicopter landing drill should be exercised regularly onboard and covered under the matrix drill plan yearly.
23	NANTONG	China	Safety of Navigation	☒	7.2.5	Noted that only GPS No.1(the position-fix system) fed the ECDIS. Recommended that GPS No.2 should be connected to in case of the No.1 GPS failed.
24	NANTONG	China	Machinery		6.2.4	The seawater pipe for the Fresh Water Generator was temporarily repaired by bead welding.
25	NANTONG	China	ISPS	☒	4.7.2/4.7.3	There was no procedure available on board to deal with the cyber security. Recommended that such procedure to be established on board and cyber security training onboard should be exercised jointly between ship and shore.

26	NANTONG	China	Bulk Carriers - Additional Safety		7.1.5	Water ingress alarm unit for the cargo holds on bridge was malfunctioning.
27	LIANYUNGANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	3.6.2/4.4.12	Only 1 set of Multi-Purpose Gas Detector was available on board, it is recommended that additional gas detector to be provided on board.
28	LIANYUNGANG	China	Working Spaces Acc Prev		3.6.2	Crew was not familiar with the procedures for "Enclosed Space Entry", only 1 set of SCBA and 1 Safety Rope were prepared as rescue equipment.
29	LIANYUNGANG	China	Working Spaces Acc Prev		3.6.2/4.4.16	Heaving Line Monkey Fist was not made in compliance with the requirements of the Code of Safe Working Practices, rubber skinned and with added weighted material inside.
30	LIANYUNGANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	3.6.2/5.4.18	Main deck heavy weather mobile safety line was not installed. It is recommended that the safety line to be installed before the commencement of sea passage.
31	LIANYUNGANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	5.2.13	Helicopter Hatch access - The present ladder has a gap from the hatch cover to the fixed platform. Same to be covered to avoid tripping hazard.
32	LIANYUNGANG	China	Safety of Navigation		7.2.1	Some events for alteration of courses were not recorded in the deck log.
33	LIANYUNGANG	China	Safety of Navigation		7.2.12	Abort Positions, No Go Positions, Environmental Information, Position Fixing Methods / Intervals were not detailed in the Passage Plan Company form.
34	LIANYUNGANG	China	Safety of Navigation		3.3.3/7.2.12	ECDIS Familiarization Checklist for the new joiners was not available in the SMS.
35	LIANYUNGANG	China	MARPOL V - Garbage		4.6.2/4.6.5	New edition of Garbage Record Books have not been supplied on board. Additional pages attached to the old edition of Garbage Record Book were in use for the recording of garbage disposal. - Remark: New edition of Garbage Record Book was supplied on board during the inspection and records were transferred from the attached additional pages to the new edition of Garbage Record Book by the Chief Officer.
36	LIANYUNGANG	China	MARPOL I - Oil		4.4.5	SOPEP Annex II - List of Coastal Contact Points was not updated (31st December 2017 was in use).
37	LIANYUNGANG	China	Machinery	<input checked="" type="checkbox"/>	6.2.24	Lub oil sampling and analysis was not aligned with the manufacturer's recommendations.
38	LIANYUNGANG	China	LSA		4.4.16	Life buoys were found with the vessel's name and home port marked at 1 side only.
39	LIANYUNGANG	China	LSA	<input checked="" type="checkbox"/>	4.4.16	Free-fall lifeboat launching procedures were not available at the access platform.
40	LIANYUNGANG	China	ISM	<input checked="" type="checkbox"/>	3.3.8	It is recommended that the safety officer to complete dedicated training course.
41	LIANYUNGANG	China	ISM	<input checked="" type="checkbox"/>	4.7.2/4.7.3	It is recommended that the Cyber Security Procedures to be established by the company, risk assessment and relevant trainings to be carried out.
42	LIANYUNGANG	China	ISM	<input checked="" type="checkbox"/>	3.2.8	Root Cause and Corrective Plan was used for reporting of third party inspection deficiencies to the shore management as per SMS, however this form does not include the measures to prevent recurrence of deficiencies and company feedbacks /acknowledgement of the close-out was not available.
43	LIANYUNGANG	China	ISM	<input checked="" type="checkbox"/>	3.3.3	The company familiarization forms for Engine - Includes only incinerators. It is recommended that other Pollution control equipment e.g. OWS, Sewage treatment Plant, Garbage control equipment etc., be included or entered in the section Further items, for relevant engineers.
44	LIANYUNGANG	China	Certificates Ship Crew			Rest hours' records for February were reviewed and found some records did not match with the training records.
45	LIANYUNGANG	China	Bulk Carriers - Additional Safety		3.6.2	Loading / Unloading Sequence Plan, the "Time Required"should be entered with the time required for cargo operations.
46	LANSAN	China	Loadlines			Auto-closing device on engine room clean drain tank sounding pipe was out of order, rectified during inspection.
47	LANSAN	China	ISM		6.2.9	Critical & Essential Spares Inventory for March/April/May 2018 were checked, For Emergency generator, the "Rule No." of Cylinder head gasket was 2 Pcs, only 1 Pcs on hand, the "Rule No." of Cylinder head cover gasket was 6 Pcs, only 1 Pcs on hand, no requisitions found for those two spares.

48	JINGTANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	5.4.10/5.4.18	Recommended that the walking passage way on the main deck(P/S) should be Non-ship surface.
49	JINGTANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	5.5	Ship's accommodation ladder was not resting in the terminal wharf as it was suspended on the fall wires over the water.(A brake system on the winch was engaged). - Ship's accommodation ladder load test certificate have no reference to acceptable load of bottom platform of accommodation ladders.(Second day of inspection, ship's accommodation ladder was resting
50	JINGTANG	China	Working Spaces Acc Prev	<input checked="" type="checkbox"/>	5.5	It is recommended that the vessel avoid the use of a shore accommodation ladder/gangway brow or portable extension ladder, that is not in apparent good condition, marked with the tare(unladen) weight, SWL(number of persons) and a valid test date. A risk assessment be made when using such
51	JINGTANG	China	Stab, Structure Equip	<input checked="" type="checkbox"/>		Recommended Critical equipment spares inventory separated from routine stores.
52	JINGTANG	China	SOLAS - Maritime Safety Security		3.6.1/3.6.2	Enclosed space entry and rescue drill had not been carried out within last 2 month.
53	JINGTANG	China	Safety of Navigation		7.1.2	There was no objective evidence in ship's deck log book when the A bridge navigational watch alarm system(BNWAS) was switched off and when the BNWAS system was switched on while the vessel was at sea or in port.
54	JINGTANG	China	Mooring	<input checked="" type="checkbox"/>		Mooring station snap back zone area was not marked per Code of safe working practice for merchant seaman 2015 edition, it was noted that old edition 2007 available onboard. Recommended risk management review to be made accordingly.
55	JINGTANG	China	Mooring	<input checked="" type="checkbox"/>	5.4.1	Mooring winch break test done on XX-XX-201X, but rendering point was not marked. Recommended winch / windlass break test to be made at proper intervals for the vessels call the high demand port - Port of Hedland frequently.
56	JINGTANG	China	MARPOL IV -Sewage		6.2.24	The lubricating oils of the air pump for the Sewage Treatment Plant was not changed on every 6 months as per manufacture's instruction as last oil changing date was on 19 Jun 2017.
57	JINGTANG	China	MARPOL I - Oil		3.6.1/3.6.2	It was observed that the Emergency direct bilge suction valve in E/R bottom plate was not secured/sealed.
58	JINGTANG	China	Machinery	<input checked="" type="checkbox"/>	6.2.22	Steering gear lub. Oil analyzed yearly, ballast remote valve lub, oil analysis was not done after delivery more than seven years. Recommended lub, oil analysis to be made per manufacture's recommendation.
59	JINGTANG	China	Machinery			Fresh Water Generator had water leaks from the condenser's outlet pipe.
60	JINGTANG	China	LSA		3.6.1/3.6.2	It was observed the painter of portside liferaft was not connected to its own weak link.
61	JINGTANG	China	ISM	<input checked="" type="checkbox"/>	4.7	Cyber security procedure established and covered in the SMS manuals was noted only for the communication system and shipboard computers followings were not covered in: -Propulsion and machinery management and power control system. -Access control system (CCTV, SSAS etc.) - Cargo/ballast management system etc. Recommended to such items be covered into Cyber Security procedure in the SMS manual and the booklet titled -The Guidelines On Cyber Security On board Ships - produced by BIMCO, to be supplied on board for crew cyber security training purpose.
62	JIANGYIN	China	SOLAS - Maritime Safety Security		5.4.9	Stbd. Pilot ladder bottom most rubber step was deformed.
63	JIANGYIN	China	Safety of Navigation	<input checked="" type="checkbox"/>		ECDIS - Vessel is fitted with two units as primary and backup. Following is recommended: 1- ECDIS specific passage plan is provided, plan to contain safety settings for each leg, minimum parameters for alarms and layers, CATZOC and corrections to apply to UKC, validity of Chart license. 2-ECDIS handover of watch check list. 3-Procedure and plans for ECDIS failure
64	JIANGYIN	China	Radio Comms	<input checked="" type="checkbox"/>	7.2.5	GMDSS Radio Log - Contains only daily positions and required weekly/monthly tests. It is recommended that additionally a summary of communication relating to Distress, Urgency and Safety be recorded.
65	JIANGYIN	China	Mooring	<input checked="" type="checkbox"/>	4.4.16	Heaving line used on board was found not COSWP (Code of Safe Working Practice) compliant. The monkey fist was found a hard metal rubberized piece and over 500 gms.

66	JIANGYIN	China	MARPOL I - Oil	<input checked="" type="checkbox"/>	6.3.3	Oily Water Separator - This system has not been used since delivery as no needed. Engineers only test alarms. It is recommended that the OWS system should be tested regularly for operation of 3 way valve, high level probes etc. to ensure the system is in good working condition when required. Also that engineers are familiar with the equipment.
67	JIANGYIN	China	MARPOL I - Oil		4.4.5	SOPEP was not filed with piping diagram and other key plans.
68	JIANGYIN	China	ISPS	<input checked="" type="checkbox"/>	4.7.1/4.7.2	Cyber security : It is recommended that vessel/company have procedures for maintenance of hardware / software. Procedures for risk assessment for cyber attack and response plan.
69	JIANGYIN	China	ISPS		4.5.4	CSR No.4 issued by Flag Panama - the issuing body of ISSC (Security certificate) is stated as DNV GL, however the security certificate onboard was issued by Flag Panama.
70	JIANGYIN	China	ISM	<input checked="" type="checkbox"/>		Safety Officer was Third Officer. He does not have a dedicated training
71	JIANGYIN	China	Bulk Carriers - Additional Safety			Loading computer - not tested against approved standard conditions.
72	FUZHOU	China	Working Spaces Acc Prev			Forecastle store - Work bench - two power grinders with protective perspex eye shields broken / missing
73	FUZHOU	China	Stab, Structure Equip			Fore Peak tank: lower level: two safety rails missing; mid-level: one safety rail missing and one safety rail with weld off at one end
74	FUZHOU	China	Safety of Navigation		7.3	The ECDIS safety depth/contour and shallow/deep contour settings were not in accordance with the requirement given in SMS Procedure WMP-07-01 xiii.G that had superseded company circular No.03, which had mistakenly
75	FUZHOU	China	Mooring		5.4.18	Recommend that signs be posted at entry to all mooring areas, warning that these are hazardous areas
76	FUZHOU	China	ISPS	<input checked="" type="checkbox"/>	4.6.5/4.7	Recommend that operators continue to develop cyber security procedures and cyber security training for ship's staff
77	FUZHOU	China	FFA		3.5	The six monthly, yearly and two-yearly maintenance described in the Hyper/Water Mist fire extinguishing system manual has not been carried out
78	FUZHOU	China	Cargo Dangerous Goods	<input checked="" type="checkbox"/>	6.3.9	Recommend that oxygen and acetylene pipes between aft main deck stores and engine room workshop be painted in identifying colors overall
79	FUZHOU	China	Bulk Carriers - Additional Safety	<input checked="" type="checkbox"/>		Recommend that training in contents of MSC/Circ.1143 be included in pre-joining or familiarization training, or in two emergency drills/exercises
80	FUZHOU	China	Bulk Carriers - Additional Safety	<input checked="" type="checkbox"/>	8.1.5	Recommend that operators develop a procedure for safe cargo hold access
81	SAKATA	Japan	Stab, Structure Equip		5.1.12	It was observed that the natural vent hinge of No.3 hatch cover (starboard after side) was wasted off (i.e. vent cover was tied up by rope)
82	SAKATA	Japan	Stab, Structure Equip		5.4.4/5.4.18	It was observed that air line for air horn at top bridge was heavily rusted and leaking air.
83	SAKATA	Japan	Stab, Structure Equip	<input checked="" type="checkbox"/>	5.4.18	It was observed that "U" clamps and pipe supports of deck pipelines (i.e. Fire lines, hydraulic lines, air lines, fresh water lines and cable lines) at least 20 locations were heavily rusted with missing "U" clamps. It is recommended that appropriate maintenance be undertaken to prevent further
84	SAKATA	Japan	Safety of Navigation	<input checked="" type="checkbox"/>	7.1.5	The gyro repeater unit at port wing bridge, dimmer control valve was stuck.
85	SAKATA	Japan	Safety of Navigation		7.2.5	The passage plan made on the ECDIS for the passage, indicated that in force "Navtex message" was not marked.
86	SAKATA	Japan	Machinery	<input checked="" type="checkbox"/>	6.2.24	The operator's policy required lube oil sample analysis for main engine to be conducted every six months; however maker's instruction was indicated to be conducted every three months.
87	SAKATA	Japan	Machinery	<input checked="" type="checkbox"/>	6.2.19/6.2.23	A earth fault of 0.3 megaohms was observed on the 100 V switchboard in engine control room.
88	SAKATA	Japan	LSA		4.4.6	It was observed that IMO symbol of two life buoys at poor deck side was not posted.
89	SAKATA	Japan	Loadlines	<input checked="" type="checkbox"/>	5.2.14	It was observed that securing cleats of No.1~7 hatch covers at least 10 locations were heavily rusted.
90	SAKATA	Japan	ISPS	<input checked="" type="checkbox"/>	4.7.2/4.7.3	The operator's procedure for the cyber security was not available (i.e. risk assessment, response plan and security training for cyber attack).
91	KUDAMATSU	Japan	Stab, Structure Equip		5.5	It was observed that "U" clamps and pipe supports of deck pipelines (i.e. Fire lines, hydraulic lines, air lines, fresh water lines and cable lines) had hard rust at few sections. The pipe sections at the u bolts were thinning down. There was however evidence of progressive maintenance.

92	KUDAMATSU	Japan	Mooring		5.5	Mooring winch brake linings were significantly worn, especially at the free ends of the brake bands where metal brake bands touched the brake drums. Hard rust was also observed on the brake drum in visible areas. The protective covering for the gear casing was also holed at approximately 25 places allowing ingress of sea spray onto the gears.
93	KUDAMATSU	Japan	Machinery	<input checked="" type="checkbox"/>	6.3.9	It was observed that the Gantry crane for Engine room (SWL 5 tons) had no records of any load testing having been carried out since delivery. Recommended to carry out same.
94	KUDAMATSU	Japan	LSA			A random check on one of the SCBA units indicated that the air bottle valve was damaged. The vessel manager presented documentary evidence of replacement unit proposed to be placed on board.
95	KUDAMATSU	Japan	ISM	<input checked="" type="checkbox"/>	4.7.1/4.7.2	There was no objective evidence to indicate that the company had any documented cyber security procedures for maintenance of software/hardware/firmware. Including cyber attack response plans.
96	KUDAMATSU	Japan	Bulk Carriers - Additional Safety	<input checked="" type="checkbox"/>	3.6.2	MSC/Circ. 1143 was available onboard at the time of inspection however no training records were available pertaining to same.
97	HIGASHI HARIMA	Japan	Stab, Structure Equip	<input checked="" type="checkbox"/>	5.5	It was observed that "U" clamps and pipe supports of deck pipelines(i.e. fire lines, hydraulic lines, air lines and cable lines) at least 30 locations were heavily rusted and it is recommended that appropriate maintenance be undertaken to prevent further deterioration.
98	HIGASHI HARIMA	Japan	Stab, Structure Equip	<input checked="" type="checkbox"/>	5.4.18	It was observed that visible area(port & starboard side) of hull between approximately 12.4 meters and 16.0 meters of draft was mostly(approximately 90% of the same) covered by marine growth.
99	HIGASHI HARIMA	Japan	SOLAS - Maritime Safety Security	<input checked="" type="checkbox"/>	6.5/6.3.6	Emergency generator could only be started by single air motor. However there was no spare starter motor available for use in event of failure of the existing start motor.
100	HIGASHI HARIMA	Japan	Mooring	<input checked="" type="checkbox"/>	5.4.20	Records indicated that mooring line plan did not include certificate numbers.
101	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.2.23	The operator's policy required lube oil sample analysis for main engine to be conducted every six(6) months; however maker's instruction was indicated to be conducted every three months.
102	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.2.23	The company fuel testing procedure was not available.
103	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.5/6.2.25	The vessel was not subscribed fuel oil analysis program when bunkering in Japanese port and only one past fuel oil analysis report was kept on board which dated 06 June 2018 within last 5 years.
104	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.5/6.2.23	Air was continuously leaking from solenoid valve of main engine back wash filter which located inside the purifier room.
105	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.5/6.3.4	Review of PMS showed renew of emergency generator lube oil filter/renew of emergency generator sump tank lube oil was overdue since XX XX 201X. Reportedly, the vessel was awaited for spare lube oil filter.
106	HIGASHI HARIMA	Japan	Machinery	<input checked="" type="checkbox"/>	6.5/6.2.15	Safe guard for moving machineries were not fitted on pump motors in engine room including #1 & 2 Jacket cooling fresh water pumps, port use cooling sea water pump and #1 & 2 main cooling sea water pumps.
107	HIGASHI HARIMA	Japan	ISPS	<input checked="" type="checkbox"/>	4.6.5/4.7.2	The operator's procedure for the cyber security was not available at the time of the inspection(i.e. risk assessment, response plan and security training for cyber attack).
108	HIGASHI HARIMA	Japan	ISM	<input checked="" type="checkbox"/>	4.5.4/4.7.2	Cyber security related procedures, guidance & risk assessment were not provided on board.
109			SOLAS - Maritime Safety Security	<input checked="" type="checkbox"/>		It is recommended to provide Cyber security procedures and Cyber attack Response Plan onboard and to keep onboard a Cyber Security Information Booklet such as 'The guidelines on Cyber security onboard ship's issued by <a href="#">DNV-GL</a> '
110			Safety of Navigation			It was observed that CATZOC information on the ship's Pilot card was applied to 0.5m instead of '0.5m + 1% depth' for the depth accuracy of A1 category only when calculating Under Keel Clearance.
111			Machinery	<input checked="" type="checkbox"/>		It was observed that ship's emergency generator was operated by 2 set of batteries. But spare electric starter motor as alternative starting system was not provided onboard.

112		ISM			It was observed that feedback from Management for ship's SMS report (Master & C/E's review, ship's monthly safety meeting, Nearmiss report) was not available onboard. There are summarized report (Incident Report 2018) from management once a year.
113					It was observed that the latest F.O. analysis report for ship's F.O. was available on 17 Jun 2017. On the record, the vessel sent F.O. sample to shore laboratory for sample analysis on 5th Jun 2018.