

# **PSC Trends**

## **Fourth Quarter 2019**



**Survey Team**

**Survey Division**

### ○ Survey direction

- Enhanced periodical survey and/or audit for Ten (10) major detainable deficiencies\*
  - ✓ **Implementation of enhanced periodical survey and audit for Ten (10) major detainable deficiencies should be carried out, if necessary, with a supportive evidence in the event of PSC detention** within a relatively short period after the completion of the survey and/or audit.
    - \* Ten (10) major detainable deficiencies:
      - 1) Lifeboat davit, winch, release gear and block assembly
      - 2) Engine starting of lifeboat and rescue boat
      - 3) Air pipe and head
      - 4) Hatch cover and its attachments
      - 5) GMDSS equipment
      - 6) Hatch coaming and its attachments
      - 7) Ventilator and E/R fire damper
      - 8) Emergency fire pump
      - 9) Oil filtering equipment/Oily water separator & Sewage System
      - 10) E/R cleanliness
  - ✓ **Equipment and/or installations to prevent marine pollution** should be properly installed and maintained.
  - ✓ All Necessary actions for oil leakage in engine room should be carried out.
  - ✓ Major deficiencies - **fire safety / emergency equipment, survival crafts** - in major PSC MoU regions should be inspected thoroughly.
  - ✓ Matters related to ISM and MLC should be checked in compliance with the relevant legislation.
  - ✓ Immediate reporting responsibilities for captain and/or superintendent :
    - Immediate reporting by a captain and/or a superintendent to port authorities should be made for any deficiencies identified during a scheduled maintenance.
    - When a ship is detained, an immediate report is required to this Class to clear up all matters related to PSC detention.
- **Intensified PSC inspection for the vessel aged and/or with poor and unacceptable maintenance recorded in the main PSC MoU regions :**

- ✓ In-depth inspection for aged vessels and/or vessels in bad maintenance records in the regions of Tokyo MoU, Paris MoU and USCG.
- ✓ Ships can be detained promptly in case significant deficiencies and/or many deficiencies are found.
- ✓ Numerous minor deficiencies may lead to detention code related to ISM.
- **Crew's familiarization of emergency response drills (especially in Japan)**
- **Immediate actions to be taken when any critical deficiency is identified on board the ship :**
  - ✓ Reporting to KR and/or flag administration
  - ✓ Reporting to port authorities prior to entering a port
- Providing updated regional PSC information to **a ship entering into a port in main MoU regions** and carrying out **PSC-pre inspection** for the ship, if necessary
- **Korean flagged ships** consistently on the **"White List" of Paris/Tokyo Mou** performance records, but **"QUALSHIP 21"** entitlement jeopardized with low distinct vessel arrivals to the US in each of the previous 3 years
- **KR on the 'High Performance Level'** in the leading Port State Control jurisdictions – USCG, the Paris and Tokyo MoU over the consecutive years

### A. Paris MoU

#### a) Detainable deficiencies

##### - FIRE SAETY

- Fire Dampers of E/R supplier fans not workings & duct distortion
- Fire Doors – upper deck entrance to staircase distortion)
- Emergency fire pump found inoperative during test
- A-class fire door in galley fixed to open
- Water mist system defective
- Some fire doors defective and not closed completely
- Several self-closing valves for sounding pipes and for level indicators blocked in open position
- Oil leakage from main engine oil cooler through damaged gaskets
- Main fire line on main deck inoperative (frozen)
- Clogged Paint room sprinkle nozzles failed to activate

##### - ISM

- ISM detainable deficiency on the basis of many deficiencies
- Collision due to non-compliance with COLREG
- Fire drill not satisfactory
- Crew not familiar with fixed CO2 system
- Crew not familiar with RADAR operation and emergency steering
- Inappropriate implementation of enclosed space procedures
- Officers unable to demonstrate operation of free fall lifeboat
- SMS implementation failure
- Crew unfamiliar with operation of machinery and position of equipment on board
- No records of lifeboat operation

##### - MLC (Working and Living Condition)

- Accommodation heating systems
- Toilets flushing system in the accommodation not working correctly
- Accommodation not in cleanliness
- All crew members' wages not paid in full and at monthly intervals

##### - Life Saving Appliances

- Lifeboat Engine not starting
- Lifeboats not lowered and maneuvered into the water
- Rescue boat and life raft defective
- Life raft expired
- Magnetic compass in lifeboat defective

- Rescue boat launching davit hydraulic leaks and pressure gauge inoperative
- Breathing apparatus set back rack broken
- Several EEBDs with insufficient air pressure

### **- Pollution Prevention**

- Deck full of oil pollution hazards
- Insufficient procedure for changeover when entering SECA (Aux. Engines and boiler)
- Sewage treatment plant not working properly
- OWS sampling pipe closed, and circulated with fresh water only to indicate 0ppm on oil content Monitor
- Eng. Room Bilge High water level alarm inoperative
- Oily Water Separator inoperative and found some leakage
- Hatch cover hydraulic cylinder found leaking
- OWS solenoid valve inoperative
- Retention indicated in Oil record book for M/E Scav. Air box drain tank is; 0.2m<sup>3</sup>. Retention really found on board in drain tank is; 0.12m<sup>3</sup>. 0.08m<sup>3</sup> missing
- Many casks with sludge oil found on board

### **- ILL**

- Side shell crack
- Manhole from engine room to void space in open
- Hatch coaming bracket crack
- Air vent head damaged and seized with metallic float disc broken and seized rubber seal detached, Natural ventilator (mushroom type) holed and patched temporarily, Gooseneck air vent closing devices missing

### **- Certificate and Documentation**

- Civil liability for bunker oil pollution damage certification is not valid (Only photocopy)
- CSR Document missing
- Oily water discharged illegally (Cert. not valid)
- Flag endorsement missing for 2/O, 3/O and C/E
- Medical certificate expired
- Captain not holding GMDSS General Operator certificate (GOC)
- No Safety Management Certificate (SMC) on board

### **- Safety of Navigation**

- VDR is inoperative
- Several navigation lights damaged and inoperative
- ECDIS not in use up to date (ENC outdated)
- Paper charts for intended voyage not up to date
- MF/HF and VHF DSC not operational

## **- Others**

- Several steam and water leakages on deck steam pipes
- Emergency exit from engine room blocked from inside by steel plate
- Insufficient ventilation of cargo holds before entering a port (excess of LEL limitation)
- No corrective action taken against deficiencies identified during the last PSC inspection
- Several nuts and bolts for void space manholes in Bosun store missing
- Boiler water level sight glass malfunction
- Incinerator not properly maintained (diesel oil solenoid valve defective)
- Gangway accommodation ladder unsafe (broken stanchion)
- Ballast water exchange not performed before entering the port
- Two sailing directions not regularly updated
- Emergency lights not working properly
- **Several manholes for ballast water tanks on portside and starboard side not properly closed**

## **b) Items to be inspected thoroughly**

### **- FIRE SAETY**

- Operation of em'cy fire pump and leak check (If it can be run in 5 minutes without any leakage, required minimum pressure of suction: -500mmHg, discharge: 3kg/c<sup>m</sup>)
- Function and contact condition of E/R funnel damper
- Condition of Fireman's outfit
- Closing condition of A-class fire door
- Fire doors in normal operation
- Installation of insulation for heat surface
- Enough ventilation of cargo holds before entering a port
- Check operation of water mist system
- Check of breathing apparatus and its attachment
- Self-closing valves for sounding pipes and for level indicators
- Operation and maintenance of main engine oil cooler
- Sprinkler nozzles in normal working condition without blockage of deposits in the nozzles

### **- ISM**

- Implementation of Fire and Abandon ship Drill and record  
(See attached Check point of Fire and Abandon ship Drill in UK)
- Black out test (simulation test) and crews' familiarity with it
- Crews' familiarity with the operation of CO2 system (delay time, bottle quantity, etc.)
- PSCO emphasizes implementation of ISM and checks real-time NIR database
- Drill records for emergency response
- SMS on board properly implemented
- Crew familiarization with machinery and position of equipment on board
- Correspondence and familiarization of SOLAS training manual and equipment on board

- Check effectiveness of emergency drills and familiarity related to responsible equipment/ installation/appliances and system
- Crew familiarization with lifeboat operation
- Compliance of procedures for enclosed space entry
- Check compliance of COLREG of duty officers

### **- MLC(Working and Living Condition)**

- Crews protection (safety devices)
- Crew's including captain and C/E working hour and resting hour record
- Toilet operation in accommodation
- Accommodation cleanness
- Wages paid regularly and in full accordance with seafarers employment agreement(SEA)

### **- Life Saving Appliances**

- Immediate start of em'cy equipment under very cold weather (Starting of em'cy generator engine & lifeboat engine, etc.)
- Magnetic compass in lifeboat
- Hydraulic system in launching appliance for rescue boat
- Condition of rescue boat and liferaft
- Navigation and radio equipment in good working condition for immediate use
- EEBDs with sufficient air pressure and good working condition

### **- Pollution Prevention**

- Operation of sewage treatment plant
- Inspection related to SOx emission (bunker notes, sampling log book, bunker change procedure)
- Operation of quick closing valve (including em'cy generator DO tank)
- Control of garbage (garbage record, galley and toilet condition etc.)
- Changing over fuel oil with Sulphur below 1.0% before entering into SECA area
- Procedures for fuel changeover when entering SECA
- Function of oily water separator and 15ppm alarm check (oil check inside discharge pipe and check for proper record of oil record book)
- High water level alarm(Eng. room)
- Hatch cover hydraulic cylinder in good working condition
- Oily Water Separator (OWS) in proper working condition

### **- ILL**

- Condition of structure (hatch cover cleat, air vent head)(hammering test)
- Function of water ingress system and de-watering system
- Manhole properly secured, closed

## **- Certificate and Documentation**

- Each Certificate (ESP File) and valid crew's license
- Valid Medical Certificate

## **- Safety of Navigation**

- VDR function and random alarm test and normal condition check after reset
- Navigation plan (berth to berth) and up-to-date notice to mariner, chart and publication
- Function of GMDSS (DC Power) and familiarity with GMDSS equipment
- Check condition of navigation lights
- Check ECDIS/ENC in use up to date

## **- Others**

- Ten (10) major detainable deficiencies and overall inspection
- Extended inspection for bulk carrier more than 15 years
- Any obstacles to interrupt safety escape from emergency escape route from E/R
- Corrosive condition of Gangway
- Engine room and S/G room cleanses (connections for piping system, oily insulation for piping, around D/G fuel pump, purifier room floor.
- Boiler water level sight glass in normal condition
- Incinerator properly maintained and in good working condition
- Em'cy lights in good working condition

## **B. USCG**

### **a) Detainable deficiencies**

#### **- FIRE SAETY**

- Main Foam Lines on deck / Fire line in Engine Room cracked and holed
- Upon examining the emergency fuel shut-off valve for the service tank to the main engine and the settling tank to the fuel oil purifier there were obstacles(2 bolts, a piece of wood wedge) observed blocking each of the spring loaded valve actuators
- Defective fire dampers for E/R and cargo holds
- One of two exh. fans in cargo compressor room acted as supply fan
- FO leaking from FO service tank and settling tank located in the E/R oil purifier room
- Fire damper located in the engine room work shop in excessive corrosion, and not closed
- 'A' class self-closing fire door inoperative.
- Fire pump inoperative
- Alarm sounder system (flashing lights and audible air horns) in category a machinery space inoperative
- Fireman's outfit defective and SCBA regulating valve stuck
- Light cover in cargo compressor room cracked



- Smoke fire detection system for cargo holds defective (Junction box cover detached)

### **- ISM**

- Master/SSO is not carrying out his duties.
- In approximately 15 minutes the lifeboat was lowered on deck below its stowed position (According to SOLAS Ch.III/Reg.31.1.5, all survival craft required to provide for abandonment by the total number of persons on board shall be capable of being launched with their full complement of persons and equipment within a period of 10 min from the time the abandon ship signal is given)
- Rescue boat was not operationally ready

### **- Life Saving Appliances**

- Wire rope splicing on the fall prevention device on the lifeboat splayed
- Rescue boat in operative
- Open type lifeboat defective (lifeboat itself and its attachments)
- Supply line pipe of lifeboat holed
- Lifeboat davit winch inoperable
- Lifeboat engine malfunction (RPM cannot be lowered after full ahead)

### **- Pollution Prevention**

- Soot drain was transferred to Sewage holding tank by portable pump and hose, and discharge to the sea
- Discharges of food waste within the Wider Caribbean Region
- E/R bilge was discharged with the unapproved way
- Oily water discharged illegally through fire main
- Bilge water from the bilge holding tank unaccounted for in oil record book
- Oily water separator defective

### **- Certificate & Documentation**

- Missing log entries in Garbage record book
- Missing log entries in oil record book part I regarding bunkering operations of fuel oil
- Log entries in oil record book part I that exceeded the maximum throughput capacity (MTC) of the OWS listed on the IOPP certificate
- Master's provisional endorsement issued by an administration expired

### **- ISPS**

- No personnel guarding the gangway allowing unrestricted access to the interior of the ship.
- PSCO's identification was not checked, nor requested by any of the crew and no visitor card was not provided for the entirety of the examination
- Restricted area hatch not secured
- Negligent control of restricted areas

## **- Others**

- Numerous unapproved electrical installation and wiring found
- AMP & Hertz gauge of emergency generator broken, water pump leaked excessively and fan belt loose
- Supply line pipe connected to winch holed
- Key missing for master control cabinet for CO2 fire extinguishing system
- Non conformities pertaining to fire fighting equipment not reported, corrective actions not taken and maintenance logs not recorded properly
- Defective inert gas system (O2 analyzer defective) not reported to port Authority

## **b) Items to be inspected thoroughly**

### **- FIRE SAETY**

- Periodical maintenance record of fire fighting and life saving equipment (life boat operation test record (both side with picture), condition of weak link of life raft and the expiration date of fire fighting and life saving equipment)
- Fire detection system in engine room and galley
- Check fire detection and alarm in E/R and Galley
- Check fire dampers for E/R and cargo holds including their operation
- Pressure check of self-breathing apparatus air cylinder of fireman's outfit and spare bottle
- Emergency stop for Fan and fuel pump
- Emergency Generator (Battery and manual start), Emergency fire pump operation, lifeboat's engine starting
- Checking normal open condition of the inlet & outlet side valve for pump of local fire extinguisher in E/R(Water Spray System)
- Insulating any object below quick closing valve should be prohibited
- Check operation of exh. fans in cargo compressor room including their operational directions
- Any leakage from Main Foam Lines on deck / Fire line in Engine Room
- Check condition of E/R fire funnel damper with its operation
- Check working condition of 'A' Class self-closing fire door
- Check emergency fire pump
- Check alarm sounder system (flashing lights and audible air horns)
- Check Fireman's outfit defective and SCBA in good condition
- Check light cover in cargo compressor room
- Check smoke fire detection system junction box in normal condition

### **- ISM**

- Confirmation for running condition of aux. machinery and detention with SMS Failure when crew's unfamiliarity

- Emergency response (fire and abandon ship drill, operation of fire equipment, emergency steering etc.) check, when unskilled operation and failure for drill, PSCO gives some time for re-education but re-failure after some period brings detention
- USCG asks to wear lifeline when fireman enters into fire during drill
- Western some area, Intensive inspection of Garbage (SMS deficiency when food waste is found in paper box)
- SMS relating detention is getting more and more
- Cleanness of galley and understanding of chief cook's duty when fire is happened in galley
- L/B launching within 10 minutes from the time the abandon ship signal is given
- Operation of emergency and its fittings/attachments
- Operation of Lifeboat davit winch

### **- MLC(Working and Living Condition)**

- Check for engine room and S/G room clean condition (connections for piping system, oily insulation for piping, around D/G fuel pump, purifier room floor, S/G ram etc. Leakage is checked after actual operation during some time. Wipe out before entering port)

### **- Life Saving Appliances**

- Check fittings and equipment of lifeboat
- Check launching appliance for rescue boat
- Check (pipe) lines connected to lifeboat davit winch
- Check lifeboat engine (Cooling water pump) well maintained and in good operating condition

### **- ILL**

- Load Line marking condition before onboard

### **- Pollution Prevention**

- Record of delivery note of bunker or lub. Oil should be corresponded with oil record book
- Actual quantity of oily bilge tank and sludge tank should be corresponded with oil record book (daily sounding recommended)
- Illegal discharge of oily bilge and sludge from the vessel (temporary discharge pipe or flexible hose)
- Quick closing valve operation test (Control air reservoir pressure)
- Record for ozone depleting substances
- Record and procedure of low Sulphur bunker change-over
- When the equipment relating safety and pollution is out of order before entering port, take a step according to SMS procedure and record and report to USCG
- Checking the VGP matters which is entered to enforce form 2013.12.19
- Procedure of changing low sulfur before entering SECA area and 200 miles from USA lands
- Record on garbage maintenance plan, garbage Record Book and keeping procedure in special areas

(Gulf, Caribbean) relating to garbage of food

- Approved pipe or other tank for sewage
- Any obstacle around spring of quick closing valve
- Any illegal discharge of oily water, etc.
- Record of bilge in holding tank
- Operation of oily water separator
- Checking the procedure and record for ballast water exchange
- Oil/Chemical Tanker had been considered as a well-maintained ship by oil major inspection.

Crew's unfamiliarity with below equipment and malfunction may lead to detention code detention

- o ODME simulation test
- o Oil/water surface detector function test
- o Cargo tank high/overflow alarm test
- o Cargo pump emergency stop test from manifold
- o IGG safety test
- o O2 analyzer test
- o Condition of deck seal, PV breaker check
- o Fixed gas sampling system test
- o Portable gas detector function and calibration check
- o Cargo log book
- o Designation for smoking area

### **- Certificate and Documentation**

- Crew license validation
- Proper Log entries in Oil Record Book regarding bunkering operations and OWS

### **- Safety of Navigation**

- Supply of emergency power source for navigation light panel, fire detection control panel, water ingress system and de-watering system

### **- ISPS**

- Control of restricted areas

### **- Others**

- Ten(10) major detainable deficiencies and overall inspection
- Uncompleted repairs and matters during dock in China causes detention
- Any damage to bottom structure of boiler
- Any unapproved electrical installation
- Check master control cabinet key for CO2 fire extinguishing system
- Proper and immediate corrective actions required to identified non conformities
- Proper operation of inert gas system

## C. Tokyo MoU (Japan)

### a) Detainable deficiencies

#### - FIRE SAETY

- Emergency fire pump (including portable type) unable to discharge to fire hose
- Pipes of fixed CO2 fire-extinguishing system for cargo holds corroded/holed/cut
- Fire detection control panel inoperative
- Fire insulation in engine room emergency escape trunk severely damaged
- A self-closing device fitted on the frame of a combustible material (wood); Fire Integrity not in compliance with its relevant requirements
- Stairway enclosure in deck house not insulated to A Class standard on main deck, poop deck and living deck

#### - ISM

- Crew is not familiar with essential shipboard procedures relating to the safety of the ship and was unable to demonstrate proficiency in performing a satisfactory fire drill. Crew failed two consecutive attempts of the drill evident by unfamiliarity (especially in Kobe, Osaka, Nagoya regions)
- Senior officers were not aware of their tasks and responsibilities
  - o 3/O doesn't know the signals for the drill
  - o Duty officer didn't ensure the proper maintenance of R/B and launching appliance
  - o Crew, Members - Not familiar with how to use the launching appliance of R/B
- Insufficient knowledge for release mechanism of the lifeboat
- Installed components of M/E and G/E not verified as required by NOx technical files
- Crew's unfamiliarity with man-overboard drill

#### - Life Saving Appliances

- Rescue boat engine - out of order due to leaked oil
- Rescue boat recovery arrangements (winch motor) not working due to problem of limit switch
- Both sides lifeboat release hooks: not reset in proper position
- Lifeboat engines on both side not operated immediately due to shortage of batteries
- Rescue boat not stowed in a position suitable for launching and recovery
- Rescue boat limit switch and braking system broken
- Steering gear of lifeboat inoperative
- No evidence of lifeboats lowered and maneuvered in the water in more than a year
- Rescue boat lever inoperative

#### - Pollution Prevention

- Oily water discharge piping leading to the overboard from the OWS was found to contain oil sludge
- Garbage Record Book not properly recorded

- Sewage Treatment Plant defective
- 15ppm Bilge Alarm not activated

### **- Certificate & Documentation**

- Flag state endorsement of C/E expired
- NOx Parameter Record Book not properly recorded

### **- Safety of Navigation**

- Stern light not complied with regulations
- S-VDR capsule containing server, malfunction
- GMDSS equipment not operational with DC power
- Several charts are old versions and some charts are not updated

### **- ILL**

- Lack of weather tightness for ventilation duct of cargo hold
- APT Tank air pipe closing device (float type) broken
- Hatch cover cleats missing or seized

### **- Others**

- Emergency generator unable to start due to starting system broken
- Some cargo operation procedures related to CSM not enough
- Anchor chain pipe on the port side in the cargo space cracked
- Holed on bulkhead of wheel house
- Pin holes on C.O.T trunk deck side wall

## **b) Items to be inspected thoroughly**

### **- FIRE SAETY**

- Inspection of fire fighting equipment
- Installation condition of fire integrity around engine room space (close-up check during survey for new ship building and after-construction survey)
- Installation of compound on cable penetration part (close-up check during survey for new ship building)
- Emergency fire pump in proper condition
- Cleanness of E/R
- Condition of Pipes of fixed CO2 fire-extinguishing system for cargo holds
- Fire detection control panel
- Fire insulation in engine room emergency escape trunk in good condition
- Fire Integrity in compliance with its relevant requirements

### **- ISM**

- Check of essential shipboard procedures relating to safety of the ship and crew's ability to carry out them
- Check operation of release hook of lifeboat
- Check understanding of crew for lifeboat release mechanism
- Check for special requirement for some Class A and C cargoes according to IMSBC Code and IBC procedure
- Components of M/E and G/E verified as required by NOx technical files

### **- Life Saving Appliances**

- Condition of battery in the lifeboat
- Rescue boat in correct position
- Conditions of limit switch and brake system of rescue boat
- Condition of limit switch for rescue boat
- Steering gear of lifeboat
- Official records of onboard drills/trainings as required by SOLAS
- Condition of rescue boat lever

### **- Certificate and Documentation**

- Flag state endorsement validity
- Periodical maintenance record of NOx Parameter Record Book

### **- ILL**

- Weather tightness for ventilation duct of cargo hold
- APT Tank air pipe closing device (float type) in normal condition
- Hatch cover cleats

### **- Pollution Prevention**

- Oily water separator filter approved by oil water separator maker should be onboard
- Oil record book entry

### **- Safety of Navigation**

- Notice marine casualty to Port authority
- Safety Navigation equipment check (Magnetic/Gyro Compass, Radar, MF/HF, etc)
- Check operation of GMDSS equipment with DC power
- Check of the latest charts and publications on board and small corrections for them

### **- Others**

- Immediate report to port authority when problems occurred
- New convention confirmation
- Newly revised Convention requirements and Certificate (IAPP, IOPP, etc.)
- Rectification inspection of deficiency for ships going within Korea-China-Japan

- Check of the cargo operation procedure related to CSM
- Condition of anchor chain pipe
- Emergency generator in working condition
- No patches or holes on bulkhead structures of cargo spaces
- No corrosion or pin holes on C.O.T trunk deck side wall

## **D. Tokyo MoU (AMSA)**

### **a) Detainable deficiencies**

#### **- FIRE SAETY**

- Em'cy fire pump inoperative
- Engine room fire dampers wasted and not effectively closing
- Fire main isolation valve unable to be closed
- Local fire fighting water mist system for the machinery spaces defective
- Steering gear room ventilators defective and unable to close
- Remote quick closing valves for F.O settling tank defective
- Funnel fire damper defective

#### **- ISM**

- SMS as implemented onboard does not ensure vessel can effectively respond to emergency situations
- ISM detainable deficiency on the basis of many deficiencies
- Enclosed space entry and rescue drill defective

#### **- MLC(Working and Living Condition)**

- Crew had not been paid in accordance with employment agreement
- Breach of minimum rest hour

#### **- Life Saving Appliances**

- Lifeboat engine defective
- Lifeboat engine exhaust pipe wasted/defective, leaking exhaust gas into lifeboat
- Lifeboat on-load release mechanism defective
- Steering system for water jet propulsion system of rescue boat defective

#### **- Pollution Prevention**

- Oily water separator 15ppm auto stop arrangement not operational
- Oil discharged over ship side
- Oily Water Separator defective due to abnormal condition of its 3-way valve
- Sewage Treatment Plant defective due to abnormal condition of its pressure motor



## **- ILL**

- Ballast tank air vent float ball defective
- Means for securing weather tightness for No.1 hatch cover defective

## **- Safety of Navigation**

- Latest charts not on board
- Crew unable to demonstrate operation of MF/HF on DC power

## **- Others**

- Automatic starting of emergency generator not working
- Overall bad maintenance on board
- Class Society not informed of various structural damage carried out by ship staff including repairs for cracks
- Handrails and stanchions on forecastle missing (approximately 4~5m)

## **b) Items to be inspected thoroughly**

### **- FIRE SAETY**

- Em'cy fire pump
- Engine room fire dampers
- Fire main isolation valve
- Local fire fighting water mist system for the machinery spaces
- Steering gear room ventilators
- Remote quick closing valves for F.O settling tank

### **- ISM**

- Fully implementation of ISM
- Satisfactory drills on enclosed space entry and rescue drill

### **- MLC(Working and Living Condition)**

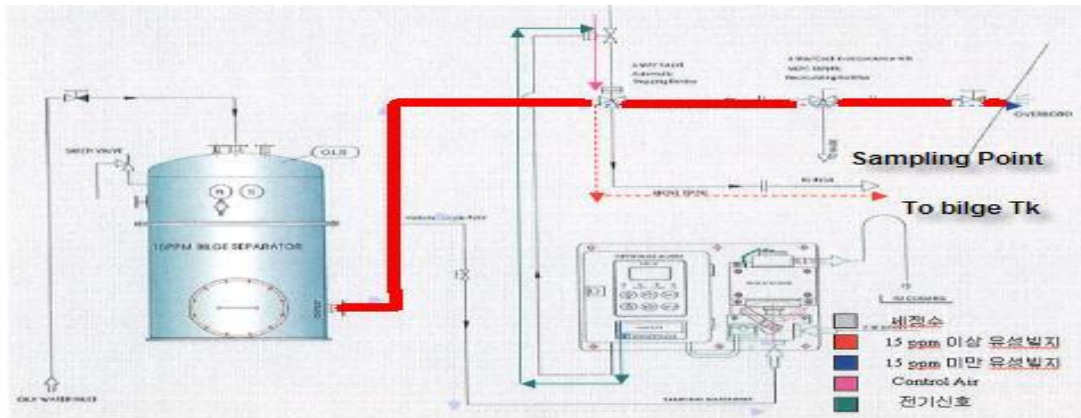
- Consistence in crew information between minimum crew certificate and labor contract
- Requirements of minimum rest hours

### **- Life Saving Appliances**

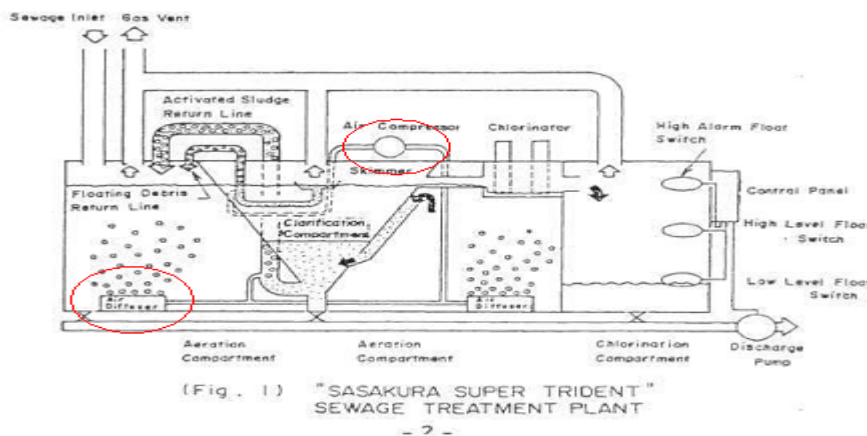
- Battery of lifeboat engine in fully charged and ready for emergency use
- Fixed eye for L/B embarkation ladder
- No obstacles to liferafts for ready for immediate use
- Limit Switch for Rescue boat davit

### **- Pollution Prevention**

- Familiarization with OWS (3 way valve and 15ppm alarm)
- Check of any oil leakage from OWS
- No Cooking oil discharged into the sea
- Records of 15ppm bilge alarm
- Operation of oily water separator and check for oil in discharge from the sampling line (please clean out the discharge pipe and filter)



- Sewage treatment operation (circulation line, hose between chambers, air compressor operation and pressure, air supply motor operation, installation of bio-filter etc.)



### - ILL

- Load Line Marking, Air pipe, Ventilator, weather-tight door
- Goose neck vent pipe for cargo hold
- Hatch cover, Hatch coaming corrosion condition
- Hatch cover rubber packing condition
- Small hatches condition on deck
- Remote dewatering system

### - Safety of Navigation

- Gyro repeater information can be seen from emergency steering position (close-up check during survey for new ship building)
- VDR alarm, fire detection system, Inmarsat, EPIRB function test
- Check of the latest charts and publications on board
- BNWS in proper operation
- Navigational lights
- GDMSS Battery in fully charged and good condition
- S/G Alarm

**- ISPS**

- Gangway watch

**- Others**

- Generator in proper condition and good operative
- Keep class society informed when major deficiencies identified on board
- Keep the relevant authorities timely informed when major deficiencies identified on board
- Marking ECDIS as education & classification statement as appropriate
- Handrails and stanchions in stable condition

**C) Case of deficiency according to the MLC**

**1. Work and rest hours**

- Checking work/rest hour comparing to Bell book record : Normally checking Captain and C/E's work hours during berthing and departure.
  - Case : Rest hour of Captain when pilot is onboard and standby.
- Checking work/rest hour during bunkering
  - Case : 2<sup>nd</sup> Eng. Actually worked at moment of bunkering but rest hour also recorded
- Checking work/rest hour during drill
  - Case : Rest hour is recorded during drill
- Missing record of work hour and overtime
  - Case : Missing record of 3 Officer's fire safety checking time
- Rest hour
  - Case : not comply at least 10 hour rest in a day and continuous 6 hour rest at one time

**2. Employ contract**

- Standard for holiday (Checking paid vacation for CADET, pay criteria)
- Due date of employ contract
  - Case : - holyday under 2.5 day per one month for crew s who has been worked under 8 months

- Not valid employ contract
- Difference of contents between Korean version and English version of employ contract

- Case : Although new contracts of Myanmar crew on board were made according to MLC, they also kept previous contracts respectively which were not in accordance with MLC

### 3. Medical examination certificate and crew license

- Case : Not valid medical examination certificate, certificate which is not made by English, No certificate for cook

### 4. Facilities of accommodation

- Case : Damage of ceiling and floor in Acc. area, Condition and number for chair in rest room, Condition of facilities in rest room such as DVD player, etc., Hot water supply in toilet and shower room, Toilet condition, temperature for refrigerator(keeping under -15 degree for Meat, Fish )

## **E. Tokyo MoU (China)**

### **a) Detainable deficiencies**

#### **- FIRE SAETY**

- Release control piping for fixed Co2 extinguisher to E/R go through the protective space that be likely cut off by fire inside
- Some fire door at accommodation with back-hold hook
- Fire Alarm control system malfunction
- Fire damper for No.2 ventilator for E/R seized
- Fire isolation on boundary between E/R and steering gear room not available, while em'cy fire pump stored in steering gear room
- Fire damper of funnel could not be closed completely
- E/R fire damper excessive gap
- A-class fire integrity partially damaged
- Funnel flap unable to be closed properly
- Fire main pipe on deck: leaking
- Emergency fire pump defective
- Fire hoses in fire hose box not available
- Quick closing devices for M/E FO SERV. TK and M/E FO SET. TK – out of order
- Cover of control box to release for Co2 system
- Air cylinder to shut down the quick closing valve: No pressure air for standby
- Fire detecting system malfunction
- Fire damper of port and ventilation for E/R cannot be closed completely
- Fire main on upper & poop deck corroded and holed
- One jet of water mist system on deck - out of order
- Cargo hold / engine room ventilator - not closed completely
- Some jacketed pipes for M/E high pressure fuel line broken

- CO2 nozzle and its pipe of the cargo hold for fixed CO2 system damaged/broken/holed
- Main fire pump water pressure not enough
- Generator exhaust pipe short of insulation material
- Protect material of high pressure oil pipe in emergency generator not intact
- Stuck S/G room damper
- Fire alarm system defective
- CO2 Room not fitted with a mechanical ventilation system, where the room is located below deck and an entrance from the open deck to the space is not provided in accordance with SOLAS II-2/Reg.10 4.3
- Fixed gas detection system in pump room not working properly
- Starting air pipe for CO2 system not connected

### **- ISM**

- Lifeboat / rescue boat failed to start & run within 2 min
- Key crew not familiar with the DG container cargo handling procedure
- Fire fighting drill failed
- Crew member not familiar with DSC transmission and Echo Sounder alarm
- ISM detainable deficiency on the basis of many deficiencies
- Rescue boat cannot release in 10 minutes due to launching and recovery arrangements – Out of work
- Enclosed space entry and rescue drill not carried out according to SOLAS Ch.III/Reg.19.3.3 and 19.3.6
- Enter enclosed space procedure not established according to MSC.350(92) and A.1050(27)
- Crew not familiar with emergency steering
- Lack of crew's familiarization with the essential shipboard procedures relating to main engine failure
- False entries in official log book pertaining to emergency training and drills conducted

### **- Life Saving Appliances**

- Rescue boat engine cannot be started by either of the batteries
- Stowage of all the liferafts not in the state of continuous readiness for launching
- Fixed eye for L/B embarkation ladder damaged
- Rescue boat davit limit switch inoperative
- EPIRB Hydrostatic Release Unit expired
- Annual service of liferafts expired
- Food rations for lifeboats expired
- Liferaft (Davit-launched type) not in compliance with the requirement of Cargo Ship Safety Equipment Certificate
- Lifeboat tiller defective
- Accumulator power failed to keep pressure for winch to swing outboard to reach liferaft
- Rescue boat waterborne test not conducted within 3 months

### **- Pollution Prevention**

- Cooking oil discharged into the sea illegally
- Trunk of oily water separator damaged: water leakages
- Oil water separator found out of order / 15PPM alarm monitor defective
- Sewage Treatment out of order due to the only air blower malfunction
- Record of 15ppm bilge device not available
- Ship discharged sludge at Shanghai, however the certificate of disposal of oil residues fake
- Bosun store bilge well high level alarm fail to test (person in charge not know 30-second delay)
- 15ppm bilge alarm not activated & bilge discharge not automatically stopped with sampling water cock valve closed; oil content meter unable to monitor the effluent from 15ppm bilge separator
- Solenoid valve on oily water separator malfunctioned
- Dosing pump of sewage treatment plant not working properly
- Illegal discharge of oily water overboard

### **- ILL**

- A lot of rubber packing of hatch covers damaged and missing
- Goose neck vent pipe for cargo hold corroded and holed on top side
- Cargo hold damaged and flooded due to collision
- Small hatch of bosun store damaged and corroded
- Dewatering remote control system for bosun store out of order (driving line clogged)
- Hatch cover and hatch coaming rusted and holed
- Malfunction of Water Ingress System in wheel house
- Hatch cover locking pins seized
- Heights of hatch coaming(450mm) and door sill to cargo pump room(550mm) not 600mm as required by LL66/P88/ANNX 1
- Water ingress alarm sensor defective
- Air pipe floats for topside tanks (TST) seized
- Escape door of steering gear room on main deck not weather-tight

### **- Certificate and Documentation**

- Former captain /chief officer / second officer / chief engineer / second engineer holding invalid certificates of competency
- Manning does not meet requirement of ship's minimum safe manning certificate due to former captain / chief officer / second officer / engineer holding invalid Certificates of Competency
- Certificate of competency of Chief Engineer on board found fake
- Certificate of insurance or other financial security in respect of civil liability for oil pollution damage expired
- IEEC / IAPP Certificate not available on board during PSC inspection
- No competent 2nd Engineer onboard as per the Minimum Safety Manning Cert.

### **- Safety of Navigation**

- Reserve source of emergency for GMDSS radio installation cannot be supplied
- IMMARSAT-C station PV-test failure and cannot receive routine message during inspection

- S-VDR fail alarm (Capsule connection error)
- Some charts expired edition in use
- Screen of stern light corroded seriously that the horizon angle incorrect
- Speed log not working
- BNWAS defective
- Harbor charts N/A
- Latest local chart not available on board
- Electronic Navigational Charts (ENC) expired
- Arrangement of NUC lights not comply with the requirements of COLREG (invisible angular sectors of more than 6 degrees)

#### **- ISPS**

- Access to ship found out of control (No one on duty at gangway)

#### **- Others**

- Number of em'cy duties is different with actual ones
- Emergency generator defective (motor burn-out, emergency stop function defective, battery problem, etc.)
- Inappropriate position of A/E F.O isolation valve
- Three generators failed to start, during inspection
- Two containers not properly segregated according to IMDG Code
- Some air pipe, fire pipe and sounding pipe corroded
- DG container loaded at Busan not segregated in accordance with the requirements of IMDG Code. However the wrong DG segregation not found by ship's crew until the ship arrived in Shanghai
- Ship was in service without going to the dry dock directly, after postponement of the Special Survey including the Docking Survey
- Gas detectors for in-transit fumigation of cargo not properly recorded in log book
- Insufficient fresh water supply for intended voyage
- Seafarers' employment agreements not confirmed by ship's owner or his representative
- Cargo hold access hatch modified without approval of flag Authority
- Food waste discharged to China's territorial waters
- Doors between wheel house and open deck not gastight (for tankers)
- Small diameter self closing control cock fitted below sounding pipes for FO tanks inoperative
- Incinerator unable to operate with inoperative negative pressure sensor
- Corrosion of manhole cover in Steering Gear Room
- Fake "Letter of Protest" on M/E LO pump reported to Port Authority
- Illegal Discharge of food waste into the sea

### **b) Items to be inspected thoroughly**

#### **- FIRE SAETY**

- Escape trunk inside size (800mmX800mm) (close-up check during survey for new ship building)

- Installation condition of fire detector and call point (close-up check during survey for new ship building)
- Em'cy fire pump suction pipe penetrating engine room and insulation for it
- Insulation condition (escape trunk, between Bridge and small space, between spaces around engine room, comparison with fire control plan/ fire protection plan)
- Condition of E/R fire damper
- Check of each ventilator
- Condition of jacketed pipes for M/E high pressure fuel line
- Condition of A-class fire integrity
- Condition of fire door
- Insulation on cable penetrated bulkhead
- Ventilator damper
- Position F.O isolation valve remote control of generator and generator itself whether distance between them more than 5 meters
- Removal of safety pin of CO2 fire extinguisher bottle according to maker's recommendation (close-up check during survey for new ship building)
- Condition of CO2 nozzle and its pipe of the cargo hold for fixed CO2 system
- Condition and water pressure of main fire pump
- Installation condition of CO2 system pilot cabinet and alarm test
- Insulation condition of generator exhaust pipe
- Insulation condition of high pressure oil pipe of emergency generator
- Any oily leakage on deck
- Fire hose in fire hose box
- Funnel damper, including condition of flap
- Fire alarm system
- Not under command (NUC) lights properly fitted at the required angular sectors
- Starting air pipe for CO2 system properly connected and working in normal condition

#### **- ISM**

- Implementation of ISM (minimum manning certificate, record for duty and rest hour of crews, fire and abandon ship drill and its record, familiarity with equipment, revision of chart and corrective action of deficiencies, etc.)
- Operation of emergency fire pump
- Crew familiarization with navigational and GMDSS equipment
- Check's understanding L/B and R/B engine starting procedures
- Operation of BNWAS
- Enclosed space entry and rescue drill at least every two months
- Procedures for recovery of persons from the water
- Crew familiarization with essential shipboard procedures
- Proper records of onboard drills/trainings as required by SOLAS



## **- Life Saving Appliances**

- Charging condition of lifeboat battery
- Condition of fixed eye for L/B embarkation ladder
- Removal of any means which can interfere with inflation of liferaft
- Rescue boat davit limit switch
- EPRIB Hydrostatic Release Unit
- Validation of liferaft annual service
- Validation of food rations for lifeboats
- Liferaft properly installed in accordance with the requirement of Cargo Ship Safety Equipment Cert
- Proper operation and maintenance of lifeboat tiller
- Emergency hydraulic accumulators in good working condition for immediate use (with no gas leakage)
- Rescue boat waterborne test at least once every 3 months

## **- Pollution Prevention**

- Operation of 3 way valve of oil water separator, 15ppm alarm and crew's familiarity (Modification of OWS should be rectified by Class and IOPP Certificate should be reissued)
- Operation of quick closing valve (air reservoir pressure and leak check for control line)
- Sewage treatment system (operation of Air blowing, shipside valve)
- Vessel calling in China should unload garbage, bilge and sludge according to domestic regulation of China
- Check any water leakage of oily water separator
- Check record of 15ppm bilge discharging device
- Cooking oil in galley is discharged into the sea directly
- Incinerator operation
- Sample cock valve to 15ppm bilge alarm should be removed unless a safety device to stop the imminent flow of bilge is provided

## **- ILL**

- Structural safety on Load Line Convention (air pipe, ventilator, weather-tight door etc.)
- Installation and condition of weather-tight door (E/R door, Windlass room door, Lifeboat door & skylight)
- Goose neck vent pipe for cargo hold
- Corrosion or holes on main deck
- Corrosion or holes on hatch cover and hatch coaming
- Condition of rubber packing on hatch covers
- Working condition of Water Ingress System in wheel house
- Small hatches condition on deck
- Remote dewatering system
- Bilge well high level alarm system in bosun store
- Condition of hatch cover locking devices
- Heights of hatch coaming and door sill in position 1 at least 600mm

- Water ingress alarm in good working condition
- Air pipes properly maintained and fully operational

### **- Certificate and Documentation**

- Validity of certificate of competency of crew on board
- Certificate of insurance or other financial security in respect of civil liability for oil pollution damage
- Valid statutory certificates on board

### **- Safety of Navigation**

- Gyro repeater information can be seen from emergency steering position (close-up check during survey for new ship building)
- Steering gear alarm check
- Operational condition of VDR (S-VDR)
- Latest local chart on board
- Arrangement of each navigational light
- Working condition of speed log
- Electronic Navigational Charts (ENC) validation

### **- Others**

- Ten (10) major detainable deficiencies and overall inspection
- High pressure double-shield fuel pipe
- Operational condition of emergency generator
- Check segregation of cargoes according to IMDG Code
- Condition of air pipe, fire pipe and sounding pipe
- Condition of generator
- Adequate records of gas detector usage
- Fresh water supply for intended voyage
- Verification of Seafarers' employment agreements
- Gastight doors between wheel house and open deck properly fitted (Tankers)

## **F. Indian MoU (Iran, Egypt, India, Oman)**

### **a) Detainable deficiencies**

- 9GHz Radar(X-Band) is out of order(Egypt)
- Publication not updated(Egypt)
- Lifteraft not serviced at service station(Egypt)
- VDR not working with GPS, AIS and give wrong code with RADAR(Egypt)
- Certificates of ISM and ISPS expired(Egypt)
- Some smoke detectors are not working(Egypt)
- Oil mist detector of M/E is not working(Egypt)
- Steering Gear Fire Detector Defective(Iran)

- Aft Electric Room E/R Emergency Exit Door unclosed (Iran)
- S-VDR no operational(Iran)
- Lifeboat engine are not working with individual set of Battery(Iran)
- Cleanliness of E/R is in very bad condition/accumulation of oil in diff. location as to posing fire hazard to the space(Iran)
- Fire line in E/R is holed(Iran)
- Heavy corrosion on hatch coaming & access(booby hatches)(Iran)
- Emergency fire pipe is unable to provide the required pressure(Iran)
- Gen's cooling line is broken(Iran)
- Fuel oil quick closing valves are not operational(Iran)
- OWS pump suction line defective(Iran)
- Crew not familiar with entry to enclosed space(Iran)
- EPIRB defective due to its battery(Iran)
- Air conditioner in E/R defective(Iran)
- Record of Rest hour not endorsed by an appropriate person(India)
- Emergency fire pump not building up pressure(India)
- Day light signal wire broken partially(India)
- Chart & Publication not corrected(India)
- Water Ingress System defective(India)
- S-VDR defective(India)
- Battery for GMDSS equipment is bad condition(India)
- Fire detection system for cargo hold defective(India)
- Cleats for hatch cover corroded(India)
- Air in EEBD completely discharged(India)
- Life Boat engine failed to start(India)
- E/R bilge leakage, all bilge wells in high level with alarm in activated condition(India)
- Incorrect entries in the oil record book(India)
- Main engine cannot be started due to broken piston rings(India)
- Life boat lowering and maneuvering in water records not maintained(India)
- Life boat muster station em'cy lights not working(India)
- Hydraulic oil line on deck damaged by high pressure and oil burst(India)
- Excessive oil leakage from several equipment and machineries in the engine room(India)
- Sea water pipe lines wasted, holed and leaked at several places(India)
- SART defective (battery problem) (India)
- Emergency bilge suction v/v found seized (India)
- Crew unfamiliar with safety system and safety equipment position on board(Oman)
- Enclosed space entry drill defective(Oman)
- Enclosed space entry drill not carried out in accordance with requirements(Oman)
- Not enough capability of senior officer to speak English(Oman)
- GMDSS equipment not operational with DC power
- E/R fire damper with excessive gap
- GMDSS log book poorly recorded

- NAVTEX in operative
- Rescue boat in poor maintenance
- Stored mechanical power not available for launching a rescue boat due to gas leakage in accumulator
- More crew members onboard than allowed by Safety Equipment Certificate (Iran)
- Man Overboard (MOB) lifebuoy marker expired (India)
- Sound powered telephone not connected, and unable to establish communication with the Nav Bridge from the steering compartment (India)

## **b) Items to be inspected thoroughly**

- Ten(10) major detainable deficiencies and overall inspection
- 5 Major Check Points in India
  - o Oil water separator function test (check for by-pass discharge line)
  - o Function of em'cy fire pump(check for pressure and leakage)
  - o Maintenance of lifeboat and drill record
  - o ISM related matters (crew's familiarity, Certificate, resting hour for crews, crew's license)
  - o Check for engine room and S/G room clean condition
- Malfunction of Fire detecting system(Detector)
- Heavily corroded hatch cover and its coaming
- Operational condition of emergency fire pump
- Check of retrieval condition of lifeboat
- Check record of rest hour for crew members : related to CIC
- Condition of day light signal
- Check small corrections and the latest version of charts and publications
- Check expiry date of liferaft maintenance on shore
- Check conditions of working and interface of VDR
- Check validity of certificates
- Check working condition of smoke detector
- Check working condition of M/E Oil Mist Detector
- Check working condition of Water Ingress System
- Check working condition of S-VDR
- Check condition of battery for GMDSS equipment
- Check working condition of fire detection system for cargo hold
- Check condition of cleat for hatch cover
- Check charging condition of EEBD
- Check working condition of Sewage Treatment Plant]
- Check sewage is discharged into the sea directly during berthing
- Check SMS implementation on board
- Check engine starting of Lifeboat
- Check bilge level in E/R
- Check record on oil record book
- Check maintenance of main engine
- Check record of lifeboat lowering and maneuvering drill

- Check emergency light for muster station of lifeboat
- Check hydraulic line on deck
- Check any oil leakage from machinery in E/R
- Check sea water pipe
- Check SART battery
- Check operation of bilge discharging arrangement
- Check oily water separator line
- Check crew familiarization on enclosed space entry
- Check crew familiarization on safety system and safety equipment on board
- Check record on enclosed space entry
- Check capability of senior officer to speak English
- Check EPIRB operation
- Check air conditioner in E/R
- Check operation of GMDSS equipment with DC power
- Check condition of E/R fire damper
- Check GMDSS Radio Log Book
- Check NAVTEX in good condition
- Proper maintenance in rescue boats
- Accumulator in good working condition for immediate availability (with no gas leakage)

## **G. Others (South America)**

### **a) Detainable deficiencies**

- Lifeboat rudder is not operated properly(Peru)
- Expiration of validity of 3<sup>rd</sup> engineer's license issued by flag Administration(Panama)
- Emergency fire pump defective(Brazil)
- Emergency generator out of order(Brazil)
- Cleanliness of E/R bad condition(Brazil)
- ISM implantation failed(Brazil)
- L/B launching not carried out and entries for drills in log book not completed(Chile)
- Free-fall lifeboat and rescue boat not maneuvered into the water for 8months(Chile)

### **b) Items to be inspected thoroughly**

- Ten(10) major detainable deficiencies and overall inspection
- Clean condition and oil leak check for engine room and below D/G, around hatch cover cylinder and steering gear floor (Brazil requires dry condition for above spaces. No exception)
- Much garbage onboard
- Oil record booking entry
- Up to date chart, Notice to mariners
- The confirmation of navigation equipment such as VDR, AIS, Radar, Gyro Repeater, etc.

- Since 2011.06.20 requirement concerning air cleanness and acclimatization has been stated on Brazilian Health regulation for calling in Brazil. Related maintenance record or Certificate from sanitary authority can be requested by PSCO.
- Brazil assigns ISM Code 30 with more than 5 Code 17s
- Brazil indicates many deficiencies relating Load Line Convention
- Load line mark condition (Painting condition)
- The detention is getting more owing to newly opening PSC office in port Callao, Peru
- Argentine PSCO implements rational inspection, but requires main propulsion system to stand-by due to low depth of water of ports (Main engine overhaul is prohibited in Argentine coast, and permission should be acquired from Authority )
- Water speed is fast at narrow channels, so both Port and Starboard side anchors should be used at anchorage. And related machinery (anchor chain, hydro motor for windlass) should be properly functioned. (when one side anchor is out of order, 2 tug boats should tug the vessel for 24 hours)
- Operation of rudder and em'cy steering
- Operation test for em'cy fire pump and em'cy generator engine  
(PSCO gives second chance. Success of 2nd start after 1st failure leads to Code. 17)
- Maintenance of crew's license and manning check comparing to Minimum manning certificate
- Update of list of national operational contact point of SOPEP
- Validity of crew's license
- Check working condition of emergency fire pump
- Check working condition of emergency generator
- Check of general cleanliness of E/R
- Check record of lifeboat and rescue boat launching
- Check ISM implementation on board

## **H. Others (Taiwan)**

### **a) Recent Trends and detainable Deficiency**

- Ten(10) major detainable deficiencies and overall inspection
- Fire door self-closing device out of order
- Oily Water Separator out of order
- Bilge water alarm malfunction in E/R
- AC 220V switch board low insulation
- EEBD & fire extinguisher certificates expired
- Emergency fire pump defective
- Fire alarm on board out of order
- Notice to mariners to be up-to-dated
- VDR on board malfunction

## **I. Others (Turkey)**

### **a) Detainable deficiencies**

- Flag state endorsement of master missing
- Flag state endorsement of C/E and 2/E expired
- Company's SMS is not effective in ensure the safety of vessel's shipboard operation
- Fire hoses in E/R bad condition

### **b) Items to be inspected thoroughly**

- Ten(10) major detainable deficiencies and overall inspection
- Intensive check for pollution (gray water discharge, etc.)
- Valid Certificate and record (ESP File etc.)
- Side shell plate confirmation(the corroded steel plate based on painting condition)
- Up-to-date SOPEP(list of national operational contact points)
- GMDSS equipment function test and familiarity of crews
- Check condition of fire hoses in E/R

## **J. Others (Vietnam, Thailand, Singapore)**

### **a) Recent Trends and detainable Deficiency**

- Ten(10) major detainable deficiencies and overall inspection
- The crew's familiarity with breathing apparatus
- Safety guidance on how to enter the close area
- The confirmation of the fire safety equipment such as fire damper, EPIRB, high pressure fuel pipe and its leakage alarm
- E/R cleanness
- Engines of lifeboat and rescue boat cannot be started
- Fire insulation in the ship's engine room severely damaged

## **K. Others (Russia, Bulgaria)**

### **a) Recent Trends and detainable Deficiency**

- Ten(10) major detainable deficiencies and overall inspections
- Check of navigational / GMDSS equipment (Russia)
- Condition of lifeboat engine starting (Russia)
- Emergency lights poor, partly not working (Russia)
- EPIRB cover damaged and its antenna cracked (Russia)
- Mooring ropes in poor condition (Russia)
- Echo sounder not working (Russia)
- Navigation light damaged (Russia)
- Lifeboat oar damaged (Russia)
- Fire alarm system defective due to its battery problems (Russia)

- Air conditioning and ventilation for accommodation out of order (Russia)
- Insulation 220v alarm & emergency lights displayed on ESB (Russia)
- No. 1,2,3 generators FO leakage alarms were not demonstrated due to sensors out of order(Russia)
- Water closets flush water inoperative (Bulgaria)
- Second means for starting emergency generator: hydraulic start inoperative (Bulgaria)
- VDR inoperative (Bulgaria)
- Lifeboat davit broken (Bulgaria)
- Forecastle hatch cover hinges damaged and corroded (Bulgaria)
- SMS: lack of effectiveness and failure of implementation (Bulgaria)
- Lifeboat engine not started for immediate use (Russia)
- Rescue boat outboard engine malfunction (no cooling water circulation, Russia)
- Embarkation ladder in poor condition (Russia)
- ECDIS malfunction with no-go areas not indicated and MSI information expired (Russia)
- Chart for engaged voyage missing (Russia)
- Fire protection self-closing door (A-class, main deck) to Accommodation interior stairway out of Order (self-closing device malfunction, Russia)
- Fire protection self-closing A-class door (emergency exit from engine room) to Engine room lower platform out of order (self-closing device malfunction, Russia)

## **L. Others (Korea)**

### **a) Detainable deficiencies**

- C/E and 1/E not duly qualified
- Door between radio room and corridor in accommodation area not in accordance with fire integrity shall be installed A-0 class fire door
- Funnel fire damper out of control
- DC Power for GMDSS Equipment Not Supplied
- Non-compliance with SMS on board
- ISPS and ISM certificates (Audit finish: 8 January 2015, Certificate issue: 5 January 2015)
- Fire control system defective
- Oil filtering equipment defective (Display)
- Failure of operation of emergency generator
- Enclosed space entry and rescue drill – crew not familiar with their duties
- Launching appliances for davit-launched liferaft in stb'd boat deck stuck
- NOx technical file for M/E and G/E not provided (crew not know the position of them)
- Fire damper for engine room ventilator fan broken due to heavy corrosion
- Maintenance of lifeboat and davit failed
- Unqualified crew on watch keeping duties
- Emergency fire pump inoperative(insufficient or low pressure)
- Annual statutory survey not carried out within due date
- Gyro Compass on bridge out of order



## **b) Items to be inspected thoroughly**

- Fire integrity and Load Line items are to be surely checked (consideration electric equipment room with auto telephone exchange to other machinery spaces)
- Signal light installation (“restricted in ability to maneuver” lights)
- Check compliance of SMS on board
- Check effectiveness of certificate issuance
- Check operation of fire control system
- Check oil filtering equipment
- Check operation of emergency generator
- Check crew familiarization on enclosed space entry and rescue drill
- Check launching appliance for davit-launched liferaft
- Check NOx technical file on board
- Check E/R fire damper
- Check maintenance and operation of lifeboat and davit
- Verification of crew’s license, and crew numbers required by Minimum Safety Manning Certificate
- Check em'cy fire pump pressure

## **M. Others (Canada)**

### **a) Detainable deficiencies**

- No cash advance to officers and crew for last nine months
- Various gauges of auxiliary engines defective and multiple leaks
- Purifier room bilges: oily, dirty and leaks at pump
- Crew members in more than 12 months of service periods on board without permission of flag State
- Dewatering control panel with no power (Power transformer burned out)

## **N. Others (New Zealand)**

### **a) Detainable deficiencies**

- Engine supply fan emergency closure inoperable
- ISM detainable deficiency on the basis of many deficiencies

## **Deficiency which should be checked during building a new ship**

- o The welding should be applied throughout the suction or discharge pipe for emergency fire pump, which penetrates the machinery space, except for the connection of flange of the sea inlet valve (ships after 2002.07.01 in 2000 SOLAS, (Korean flag ships after 2001.01.05))
- o Escape trunk inside size (800mmX800mm) (2002.07.01 Keel Laying) after installation of inside Insulation and Structural support should be confirmed
- o Interference Pilot ladder with overboard scupper

- o Fire integrity(boundary around engine room, escape route and under-side of bridge etc.)
- o Installation distance of fire detector(Ro-Ro ship(2012.07.01 K/L)'s movable deck should be applied)
- o Installation of hatch cover(clearance, weather-tight) check and installation condition of small hatch(interference with support, pipe and weather-tight)
- o Removal of safety pin of CO2 fire extinguisher bottle according to maker's recommendation (close-up check during survey for new ship building)
- o Installation of Navigation light
- o Holding back device installation in fire door
- o Installation of handrail for escape route in accommodation
- o It is recommended for manual call points to be installed in CO2 room & em'cy generator room (still discussing in IMO)
- o Certificate state and endorsement for approved manual
- o Approved Certificate, publication and manuals should be supplied to ship before ship's delivery
- o Difference between air draft on wheel house post and actual draft for ship's maneuvering
- o Correspondence of Load Line Marking and Mark on Load Line Cert.
- o Fire damper on E/R funnel(smoothly working, leakage of pneumatic pipe)

**Attachment 1 : Check points and guidance for fire fighting drill in UK**

**Attachment 2 : Ireland PSCO Checklist**

**Attachment 3 : USCG Document Checklist(Freight Vessel)**

**Attachment 4 : USCG Document Checklist (Tanker)**

**Attachment 5 : SMC Audit/Periodical survey Document General Checklist**

**Attachment 6 : ECDIS Check flow Chart of Australia**

**Attachment 7 : Hong Kong PSC Short Checklist**

## [ Attachment 1 ] Check points and guidance for fire fighting drill in UK

### ■ Progress for fire fighting drill

- o Don't run(panic) when fire-signal for drill coming
- o Close all doors in accom. on way to muster station
- o Just carry and don't wear life jacket(it should be used for abandon ship drill)
- o All crews should be gather at muster station including person on duty
  - confirmation for injured and missing crew
- o All crews carry their equipment(fireman's outfit, fire hose etc.)
  - crew should be informed where equipment store in advance
- o Don't enter into the accom. area after run out of there because the area is filled with fire and smoke
- o Fire hose has proper length to reach to the E/R floor
- o Fire line for cooling for area around fire should be supplied until end of drill
- o A jet of fire line for cooling should be held by 2 persons as 1 team
  - The second officer controls crews on scene
  - The length of hose should be consisted with 2 or 1 hose according to ship's condition
  - Duty should be granted in advance
- o Em'cy fire pump should be used for fire in E/R and main fire pump should be used for fire in area of em'cy fire pump
- o Don't reach to em'cy fire via E/R filled with fire and smoke
- o Fire hose should be carried by at least 2 persons as 1 team who wear BA and fireman's outfit
- o The fire team should start to wear fireman's outfit at muster station  
(Fire team is consist of at least 5 persons and the first officer is leader. 2 persons wear fireman's outfit and other 2 persons assist to wear.)
- o Pressure check for BA and tight test for mast
- o Fire team enters into fire zone according to the instruction of first officer
- o Feel the surface heat with his hand
- o The second person of fire team helps not to disturb another person with fire hose entering
- o Other people without fireman's outfit must not enter into the fire zone
- o Mission of the first fire team is to rescue the injury
- o After rescue of the injury, another fire team of at least 2 persons with fireman's outfit enters into the fire zone
- o The first officer reports entering and coming out time, name of fire team and pressure of air bottle to the bridge and records on the bulletin board
- o At bridge the progress of distress call, report to shore etc. should be carried out
- o At bridge condition from on scene report should be recorded on the copied fire control plan. (the fire zone, entrance, situation of fire team etc.)
- o The third officer records all report on log book
- o Rescue team is consist of 2 persons
  - The second officer controls

- Stay not far from the fire zone without strong wind

(Preparation: stretcher, first aid kit, blanket, basket with water in a half, oxygen respirator, cooking vinyl foil for burn damage etc.)

- Move the injury to the safe place and give treatment
- Rescue team should know how to use oxygen respirator and wash the burn damage and wrap with cooking foil

## ■ Instruction for fire fighting drill

- o Before fire fighting drill, PSCO instructs to crews below and start drill
  - According to SOLAS Chapter III Reg.19.3.1, drill should be carried out just like actual situation at sea
- o All lights can be off to make up the situation but emergency lights can be on for the unforeseeable circumstance
- o PSCO gives some information such as assumption of fire in E/R which is filled with fire and smoke
- o When the fire zone is designated, report the fire to captain at bridge (personally not with phone)
  - In many cases, fire report can be omitted
- o Don't enter into E/R with big fire and smoke just with a portable fire extinguisher. In that case PSCO considers person without wearing fireman's outfit and coming into the fire zone as a dead person and isolates person from drill
- o All persons carrying fire hose and entering into fire zone should wear fireman's outfit
- o Arrange for the hose for cooling around fire zone
- o At bridge all report from the scene should be submitted and properly recorded on log book
- o In many cases the rescue team is not familiar with oxygen respirator and treatment of burning damage

## ■ Attention for consulting company for fire/abandon ship drill

- o Prepare all equipment not to waste unnecessary time for checking equipment for drill. Wasting time is led to increasing cost
- o Make the arrangement for consulting company to be on board right after the vessel is berthing.  
Repetitive drill that crews can be accustomed to should be carried out before PSCO comes on board
- o Massive cost will be charged for rectification when the vessel is detained with deficiencies of drills
- o Incentive and options for training without additional cost will be a good manner to reduce the expense when ship is not detained for the drills

## [ Attachment 2 ] Ireland PSCO Checklist



MEI check for BC

Ireland PSCO 2011.2.10

Aide-mémoire for inspections  
Inspection folder Section J

### AIDE-MEMOIRE FOR AN EXPANDED INSPECTION ON A BULK CARRIER

To the extent applicable the following items can be considered as part of an expanded inspection for a bulk carrier (Ref. Paris MOU Annex 1, section 8.3)

1. black-out and start of emergency generator; <sup>1</sup>
2. inspection of emergency lighting; ;
3. operation of emergency fire pump with two fire hoses connected to the fire main line;
4. operation of bilge pumps; ;
5. closing of watertight doors; ;
6. lowering of one seaside lifeboat to the water;
7. test of remote emergency stop for e.g. boilers, ventilation and fuel pumps; <sup>2</sup>
8. testing of steering gear including auxiliary steering gear;
9. inspection of emergency source of power to radio installations; <sup>3</sup>
10. inspection and, to the extent possible, test of engine room separator;
11. possible corrosion of deck machinery foundations;
12. possible deformation and/or corrosion of hatch covers;
13. possible cracks or local corrosion in transverse bulkheads; ✓
14. access to cargo holds; ✓
15. verification that the following documents are on board, review them and confirm that the flag State or RO has endorsed them :
  - (1) reports of structural surveys, GH report ✓
  - (2) condition evaluation reports, ✓
  - (3) thickness measurement reports,
  - (4) descriptive document referred to by IMO resolution A.744(18).

MEI checklist used by Ireland PSCO  
2011.2.10.

**PARIS MOU - CONFIDENTIAL**

## [ Attachment 3 ] USCG Document Checklist(Freight Vessel)

### USCG Freight Vessel Document Check List

#### Documents

- Certificate of Registry
- Class Certificate
- International Tonnage Certificate (ITC)
- Cargo Ship Safety Construction Certificate (SC)
- Cargo Ship Safety Equipment Certificate (SE)
- Cargo Ship Safety Radio Certificate (SR)
- International Load Line Certificate (ILL) and/or Load Line Exemption Certificate (ILL-EX)
- International Oil Pollution Prevention Certificate (IOPP)
- International Air Pollution Prevention Certificate (IAPP)
- Engine IAPP (EIAPP) for each Engine
- Final NOx Technical File for each Engine
- Document of Compliance (DOC - ISM)
- Safety Management Certificate (SMC - ISM)
- Safe Manning Certificate
- Crew Licenses, Certificates and Endorsements according to STCW
- International Ship Security Certificate (ISSC)
- Continuous Synopsis Record (CSR)
- Certificate of Financial Responsibility (COFR)
- Foam Analysis Report
- Fixed Fire Fighting Certificates
- Life Saving Certificates
- Shipping Papers
- Material Safety Data Sheets for Cargo

#### Record Books and Plans

- Shipboard Oil Pollution Emergency Plan (SOPEP)
- Non-Tank Vessel Response Plan (NT-VRP, for Non-Tanker)
- Tank Vessel Response Plan (Tank VRP for Oil/Chemical Tanker)
- Oil Record Book
- Dangerous Cargo Manifest
- Ballast Water Management Plan (BWMP)
- Ballast Water Management Record Book (BWMR)
- Garbage Management Plan (GMP)
- Garbage Record Book
- Drill Log
- Fire and Life Saving Equipment Training Manual
- Fire and Life Saving Equipment Maintenance Manual
- Stability Booklet
- Cargo Securing Manual

## [ Attachment 4 ] USCG Document Checklist (Tanker)

### LIST OF DOCUMENTS TANK VESSELS

The following is a list of documents that will need to be reviewed by the Coast Guard Port State Control Officers during all for Certificate of Compliance examinations. Please ensure that those items are made available.

1. All ships certificates
  - a. Registry Certificate
  - b. Classification Document
  - c. Minimum Safe Manning Document
  - d. SOLAS Safety Construction Certificate
  - e. SOLAS Safety Equipment Certificate
  - f. SOLAS Safety Radio Certificate
  - g. SOLAS Cargo Safety Certificate(if applicable)
  - h. International Loadline
  - i. International Oil Pollution Prevention Certificate
  - j. International Air Pollution Prevention Certificate
  - k. Engine International Air Pollution Prevention Certificate (if applicable)
  - l. International Tonnage Certificate
  - m. Document of Compliance Certificate
  - n. Safety Management Certificate
  - o. International Certificate of Fitness (if applicable)
  - p. NLS Certificate (if applicable)
  - q. International Ship Security Certificate
  - r. Continuous Synopsis Record
2. Officers Licenses and Flag State Endorsements
3. Crew List (US and IMO)
4. ~~Ship's Particulars Sheet~~
5. Ship Security Records
6. Oil Transfer Procedures
7. Garbage Record Book
8. Garbage Management Plan
9. Ballast Water Record Book
10. Ballast Water Management Plan
11. Bunker Delivery Notes
12. Oil Record Book (Parts I and II if applicable)
13. Shipboard Oil Pollution Plan Manual or SMPEP
14. Vessel Response Plan Letter
15. Pressure and Vacuum Valve Service Letters
16. Vapor, Oxygen, and LEL meter calibration Letters
17. Vapor Recovery System Manual and Statement of Compliance Letter
18. Inert Gas System Manual (if applicable)
19. Crude Oil Washing Manual (if applicable)
20. Liferaft Servicing Certificate
21. Fire Extinguisher Servicing Certificate
22. Foam Test Letter
23. Hydrostatic Test Records Cargo Pipes and Hoses
24. Long Range Identification Tracking Conformance Test Report

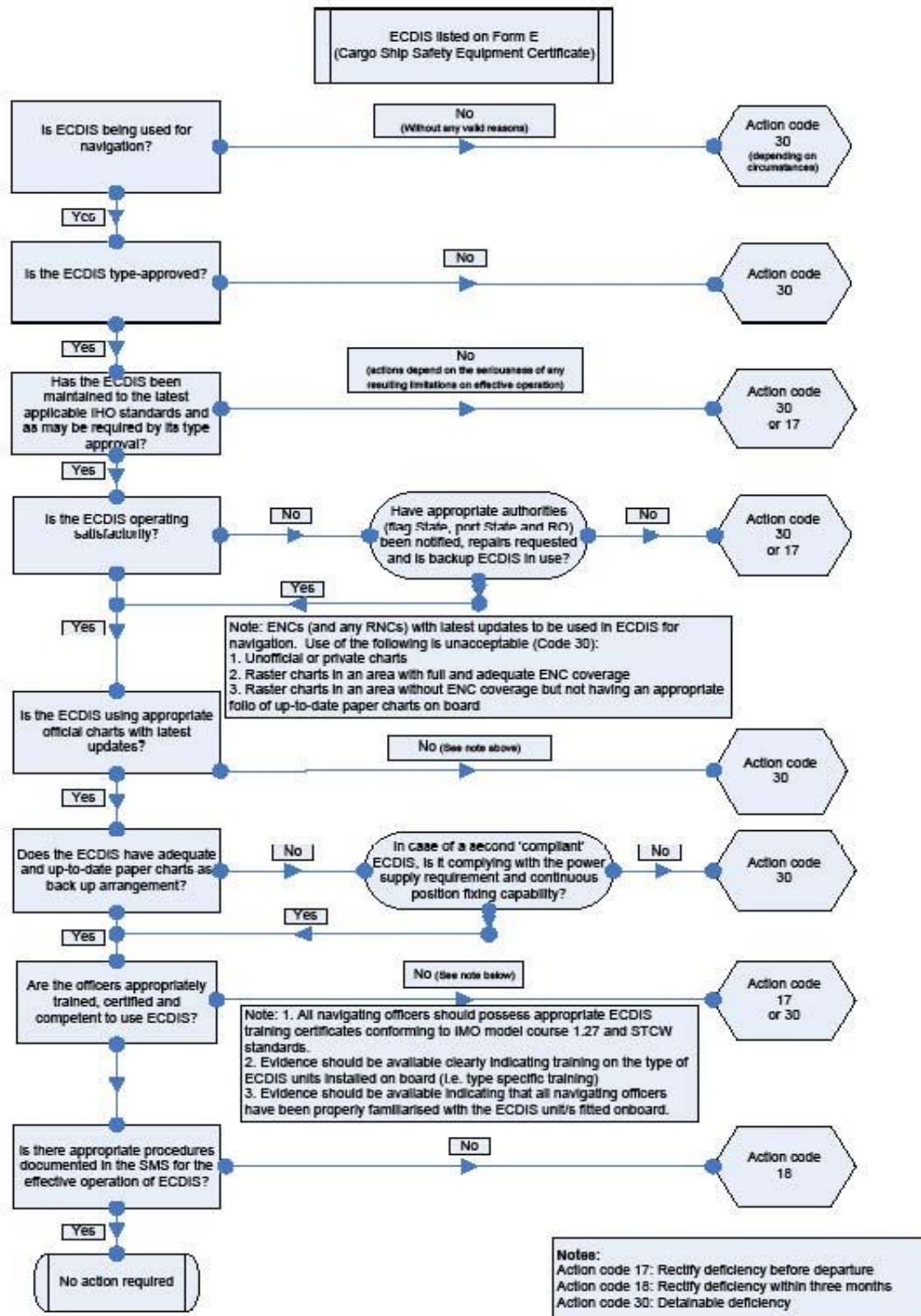
## [ Attachment 5 ] SMC Audit/Periodical survey Document General Checklist

- DOC
- SMS Document, related Master List, NC record of previous audit, corrective action
- Crew List, ITC, Ship's Registry
- Record for internal audit
- Officer's license, Seaman's book
- Crew Member's Medical Certificate
- ISPS (Certificate for SSO Security education, Internal audit record, Record for security education, Test report for security equipment)
- PSC record
- Em'cy towing procedure(new ship:2011.01.01, existing ship:2012.01.01)
- Stability booklet, Grain Loading Manual
- Loading Instrument Certificate and approved manual
- Cargo Securing Manual
- ESP survey report file
- Maritime information and maintenance
- Deck log book record for limited view navigation
- Record for self safety management before departure
- Publication master list(including IMASAR Manual)
- Approved SOPEP
- Oil record book(Oil record book II for oil tanker)
- ODMC Manual
- COW Manual
- 15ppm bilge alarm calibration certificate
- Garbage management plan
- Garbage record book
- Garbage placard
- IAPP (Oil delivery note file, record of bunker change-over, Inventory for ozone depleting substances, EIAPP certificate, Final technical file)
- ISPP (Approved discharge rate for sewage holding tank)
- VGP (Vessel General Permit) – US EPA issues Permit Coverage
- Maneuvering booklet and maneuvering information(W/H)
- Cargo operation records, Stowage plan, Cargo manifest, Loading/Discharging plan, MSDS(Material Safety Data Sheets)
- Safety Equipment maintenance record (LRIT, VDR, EPIRB, AIS, SSAS, Liferaft, Lifeboat & Davit, Immersion suits air test report, CO2 cylinder hydro test record(according to flag), CO2 cylinder weighing, Fireman's outfit self breathing apparatus air cylinder hydro test, Safety equipment air cylinder hydro test, EEBD hydro test, Portable fire extinguisher hydro test, Portable fire extinguisher annual test report)
- SOLAS training manual , fire fighting training manual, fire safety operational booklets
- Safety radio annual inspection report

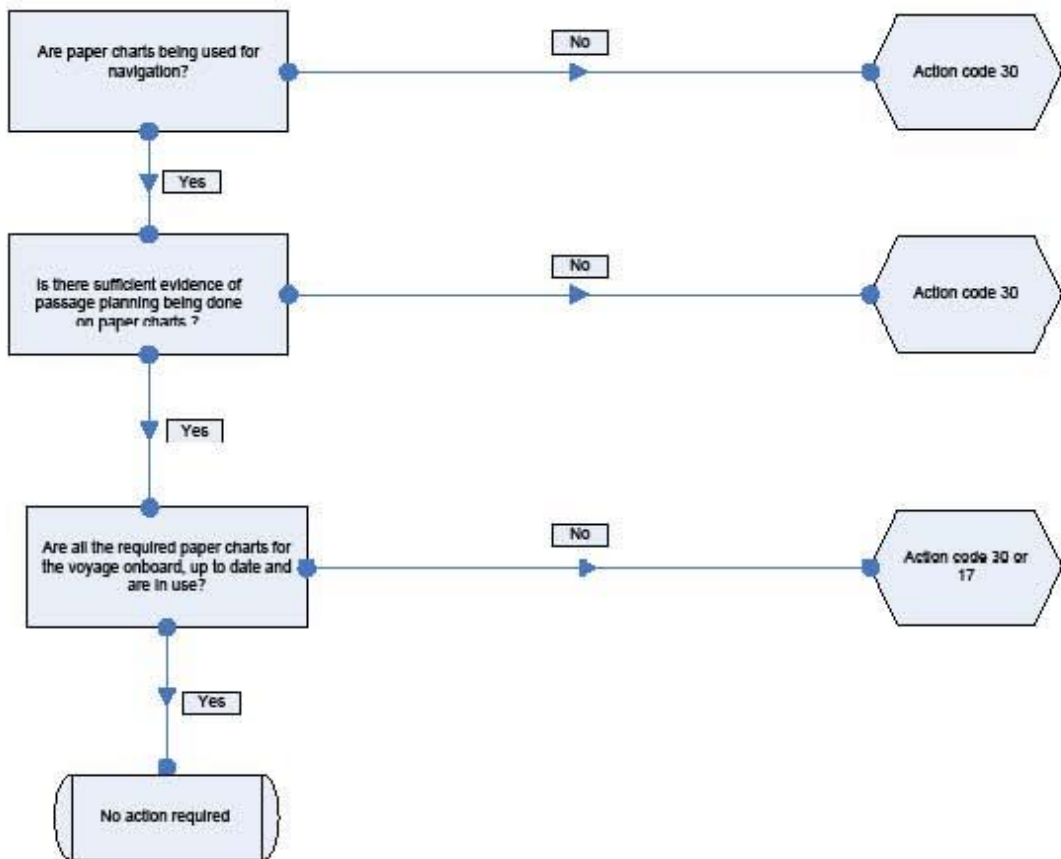


- Radio log
- Chart list and Chart correction log
- CSR(Continuous synopsis record)
- VRP(Vessel response plan) with USCG approval letter
- Ballast water management plan(BWMP) and Ballast water management record
- Medical and Medicine log inventory
- Plan of em'cy drill and exercise and their records
- Em'cy drill – fire and abandon ship drill (Muster list, scenario)
- Embarkation ladder load test(first periodical survey after 2010.01.01, can be postponed to next docking survey)
- VOC management plan(crude oil tanker, 2010.07.01)
- EU directive 2005/33/EC(Low Sulphur 0.1%)

# [ Attachment 6 ] ECDIS Check flow Chart of Australia



**ECDIS NOT listed on Form E**  
(Cargo Ship Safety Equipment Certificate)



**Notes:**  
Action code 17: Rectify deficiency before departure  
Action code 30: Detainable deficiency

# [ Attachment 7 ] Hong Kong PSC Short Checklist

## Short Checklist

### Opening

1. Purpose of PSC: to ensure the safety of life at sea and in ports and the growing urgency of protecting the marine environment and its resources; also improving the living and working conditions at sea.
2. MD Notice No. 76 (Act of Bribery to Public Servants)
3. Last PSC inspection held and vessel ETD

### Document (文件)

1. Trading Certificates 船舶證書 (SSC, SEC, SRC, LLC, IOPPC, ITC69, DOC, SMC, ISSC, ISPPC, IAPPC, Safe Manning), DOC of special requirement for ship carrying DG; Last PSC Report by Tokyo MOU
2. Registry Certificate of ship; Ship particulars + MMSI No.
3. Crew List (船員名單) Vs Safe Manning Certificate (船舶最低安全配員證書)
4. Master, all Officers License issued by Flag + National COC+SSO(endorsement)+GMDSS GOC 船員適任証)
5. Medical Certificate of all Crew (健康證明書)
6. Stability Booklet approved by Class (穩性證明手冊)
7. Cargo Securing Manual (貨物繫固手冊)
8. SOPEP Manual (船上油類污染應變計劃)
9. Oil Record Book from C/E + Bunker Deliver Note (油類記錄簿+加油收據)
10. Garbage Record Book (垃圾記錄) ✓
11. E/FIRE, AIS and VDR Annual Service Report (保養記錄) + LRIT -- Performance test
12. Life-raft Service Record (救生筏保養記錄) ✓ *Manual Survey / 5 years*
13. Fixed Fire Fighting System Service Report (CO2 or Foam) (保養記錄) ✓
14. Last 10 port of Call with security level and Continuous Synopsis Record (連續說明紀錄)

### Preparation for testing:

1. MF/DSC function test with emergency power supply
2. Lifeboat / Rescue Boat Engine testing (救生艇機械)
3. Emergency Fire Pump testing (應急救火泵)
4. Oilly Water Separator / 15 ppm alarm (油水分離操作)
5. Emergency Generator testing (應急發電機)
6. Emergency Steering Gear testing (應急舵機操作)
7. E/R and Funnel Fire Damper
8. E/R Bilge alarm
9. Smoke detector

### Preparation for Visual Inspection:

1. CO2 or/and Foam room
2. Oil Puffer area
3. Battery room ~ GMDSS
4. Pain Locker
5. Emergency Escape Door from E/R
6. Galley area

+ Pilot Ladder

## Short Checklist

### Opening

1. Purpose of PSC: to ensure the safety of life at sea and in ports and the growing urgency of protecting the marine environment and its resources; also improving the living and working conditions at sea.
2. MD Notice No. 76 (Act of Bribery to Public Servants)
3. Last PSC inspection held and vessel ETD

### Document (文件)

1. Trading Certificates 船舶證書 (SSC, SEC, SRC, LLC, IOPPC, ITC69, DOC, SMC, ISSC, ISPPC, IAPPC, Safe Manning), DOC of special requirement for ship carrying DG; Last PSC Report by Tokyo MOU
2. Registry Certificate of ship; Ship particulars + MMSI No.
3. Crew List (船員名單) Vs Safe Manning Certificate (船舶最低安全配員證書)
4. Master, all Officers License issued by Flag + National COC+SSO(endorsement)+GMDSS GOC 船員適任証)
5. Medical Certificate of all Crew (健康證明書)
6. Stability Booklet approved by Class (穩性證明手冊)
7. Cargo Securing Manual (貨物繫固手冊)
8. SOPEP Manual (船上油類污染應變計劃)
9. Oil Record Book from C/E + Bunker Deliver Note (油類記錄簿+加油收據)
10. Garbage Record Book (垃圾記錄) ✓
11. E/FIRE, AIS and VDR Annual Service Report (保修記錄) + LRIT - Performance test
12. Life-raft Service Record (救生筏保修記錄) ✓ *SV 18-3* *Manual Survey / 5 years*
13. Fixed Fire Fighting System Service Report (CO2 or Foam) (保修記錄) ✓
14. Last 10 port of Call with security level and Continuous Synopsis Record (連續說明紀錄)

### Preparation for testing:

1. MF/DSC function test with emergency power supply
2. Lifeboat / Rescue Boat Engine testing (救生艇機械)
3. Emergency Fire Pump testing (應急救火泵)
4. Oilly Water Separator / 15 ppm alarm (油水分離操作)
5. Emergency Generator testing (應急發電機)
6. Emergency Steering Gear testing (應急舵機操作)
7. E/R and Funnel Fire Damper
8. E/R Bilge alarm
9. Smoke detector

### Preparation for Visual inspection:

1. CO2 or/and Foam room
2. Oil Purifier area
3. Battery room - GMDSS
4. Pain Locker
5. Emergency Escape Door from E/R
6. Galley area

+ Pilot Ladder