

CHECKS ON BOARD

Preventive measures to reduce deficiencies



Rev. 01/2024

1/2

ISM - General Safety

Organizational Drills & Training

Assigned to:

☐ Master ☐ C/O ☐ __NWO ☐ other: _____
☐ C/E ☐ __TWO _____

Remarks / Findings:

Date: _____ Initial: _____ Signature: _____

Technical or organizational failure?
Something overdue or not compliant?
Failures are part of managing the
bridge. In such a case:

Use the available **ISM tools**
of the company!

Be aware:

As a matter of principle, proper behaviour in an emergency also requires

- good organization
- good preparation
- well-maintained equipment

Inspectors will look for these points in particular.

Avoid giving the impression of poor organization, as this would prompt an inspector to carry out a deeper and more intensive review.



Further details: see enclosed information sheet.

Organizational

01. Muster List – Public

☐ ☒ ☐ ☒

Exhibited in noticeable places (made public) throughout the ship incl. the navigation bridge, engine-room and crew accommodation spaces.

02. Muster List – Updated

☐ ☒ ☐ ☒

Updated with crew currently on board. Passengers and relatives not included. No outdated lists anywhere on board (e.g. in training manual). Avoid creating public lists other than those required by IMO / Company ISM SMS.

03. Muster List – Completed

☐ ☒ ☐ ☒

Identifying general alarm and abandon ship alarm, muster station, position of GMDSS / EPIRB / SART / VHF, crew members responsible for maintenance of FFE & LSA.

04. Muster List – Competency

☐ ☒ ☐ ☒

Persons with assigned duties have a STCW basic safety certificate, persons assigned as leaders for life & rescue boats have a certificate of competency for these duties.

05. Muster List – Compared

☐ ☒ ☐ ☒

Organizational structure & assigned duties: equivalent to the ISM Emergency plan / other plans (e.g. recovery of persons).

06. Training Manual – General

☐ ☒ ☐ ☒

Available as a minimum at mess & recreation rooms (or in each cabin), contents ship-specific (includes/amended by copies of operating instructions of LSA, FFE and equipment on board as per SOLAS II-2/15, III-35).

07. Training Manual SOLAS II-2/15, III/35

☐ ☒ ☐ ☒

All manuals consider explicitly all 18 requirements listed in Reg. III/35 and all 7 requirements listed in Reg. II-2/15.

08. Fire Safety Operational Booklet

☐ ☒ ☐ ☒

Available as a minimum at mess & recreation rooms (or in each cabin), contents ship-specific and considering on-board cargo & FFE. Can be combined with training manual.

09. F&S Plan

☐ ☒ ☐ ☒

Fire Control & Safety Plans are kept up to date and changes are added to available plans.

10. F&S Plan – Access area

☐ ☒ ☐ ☒

Access area outside the superstructure: an updated plan should be available in a weathertight enclosure of strong color to support shore fire brigades. Recommendation for cargo ships: keep an updated crew/pax list at same location.

11. F&S Plan – Fire doors

☐ ☒ ☐ ☒

The F&S plan and the actual as-is installation of the doors and their devices incl. self-closing types match.

12. Reporting Defects

☐ ☒ ☐ ☒

If an accident occurred or a defect is discovered affecting the ship or the efficiency/completeness of its LSA, FFE or other equipment, was this reported as required (Flag/Class/PSC)?



PREVENTIVE MEASURES CHECKS ON BOARD

Rev. 01/2024

2/2

Maintenance

13. **SOLAS Maintenance Manual** ☒ ☒ ☒

Available & ship-specific (includes copies of maker's instructions of on-board LSA). Manual includes checklist for LSA (SOLAS III/20.7) & all 7 requirements of Reg. III/36.

14. **SOLAS Maintenance Plan** ☒ ☒ ☒

The plan for fire safety is updated and includes the systems, appliances & equipment available on board and identified by SOLAS II-2/14.

15. **Maintenance – Planning** ☒ ☒ ☒

An effective system for planning and monitoring is in place (e.g. PMS or equivalent) incl. as a minimum the equipment identified by SOLAS II-1/3-9, II-2/14, III/20, III/36.

16. **Maintenance – Overdue Jobs** ☒ ☒ ☒

PMS or equivalent do not indicate overdue jobs in relation to LSA, FFE, SAR. In case of overdue jobs: legal time limits / expirations should not be reached. If reached, an ISM NC has been issued and evidence of having informed the flag state (exemption, statement) is available.

17. **Records** ☒ ☒ ☒

Records are available of weekly and monthly safety checks of FFE and LSA.

Placards & Labels & Instructions

18. **IMO Label / Placards** ☒ ☒ ☒

LSA/FFE/FE IMO symbols and instructions are complete, in place and of adequate condition.

19. **IMO Label / Placards** ☒ ☒ ☒

Storage places for LSA/SAR and the number of devices (if more than one) is posted.

20. **Operating Instructions** ☒ ☒ ☒

Instructions posted on/in the vicinity of survival craft and their launching controls, which illustrate the purpose of controls and their operation incl. instructions & warnings. Visible under emergency lighting conditions.

21. **Escape Routes & Emergency Exits** ☒ ☒ ☒

Escape routes and emergency exits leading to the muster & embarkation stations must be safe. Assembly station must be marked and illuminated.

22. **Escape & Exits Machinery** ☒ ☒ ☒

Escape routes & emergency exits of the machinery space are clearly marked, illuminated, operational & unobstructed.

Safety Stores & Emergency control stations

23. **Condition of Safety Stores** ☒ ☒ ☒

Dry, clean, tidy and well-lit. Equipment is complete as per F&S Plan and appropriately stored and protected against mechanical, chemical and thermal impacts.

24. **Control stations** ☒ ☒ ☒

Dry, clean & tidy, appropriately illuminated, operating instructions posted, operational readiness maintained. Controls & visual indicators are not damaged and functional.

Drill & Training

25. **Pre-Planning** ☒ ☒ ☒

Required safety drills are pre-planned, taking into account the emergency plan and equipment on board. Records are available.

26. **Conduction** ☒ ☒ ☒

Required & safety drills are conducted and recorded as planned and required. Appropriate records are available. If not done at the prescribed time, an entry shall be made in the ship's logbook stating the reason(s).

27. **Various Locations** ☒ ☒ ☒

Fire drills are carried out at different locations, within two months all existing fire-extinguishing systems and appliances / FFE were involved in exercises / trainings

28. **Records on Operational Readiness** ☒ ☒ ☒

Records indicate that used equipment was checked and is readily available for emergency service.

29. **Lifeboat** ☒ ☒ ☒

Lifeboat waterborne & driven by assigned crew at SOLAS compliant intervals (every 3 months), appropriate records are available.

30. **Rescue Boat** ☒ ☒ ☒

Rescue boat waterborne & driven by assigned crew at SOLAS compliant intervals (at least every 3 months), appropriate records are available.

31. **Enclosed Space Entry** ☒ ☒ ☒

Enclosed space entry & rescue drills are conducted at appropriate intervals (at least every 2 months) taking into account the ship-specific ISM emergency plan.

32. **Steering Gear** ☒ ☒ ☒

Steering gear drills are conducted at appropriate intervals (at least every 3 month), records are available.

33. **Recovery of Persons from Water** ☒ ☒ ☒

Ship-specific plan available. Records of drills & trainings are available as per ISM SMS recovery plan.

34. **Emergency Towing** ☒ ☒ ☒

Records of regular drills & trainings available. Updated Emerg. Towing Booklet available at bridge, forecastle & cargo spaces (in total 3 copies).

35. **SOPEP / SMPEP** ☒ ☒ ☒

Plan available and updated. Drills & trainings conducted and recorded incl. simulated SAT-C or equivalent messages.

36. **CARGO-related** ☒ ☒ ☒

Cargo-related drills & training conducted, e.g. transport of dangerous goods: IMDG, EmS, MFAG

37. **Others (ISM)** ☒ ☒ ☒

The various emergency plans of the ISM SMS are regularly subject of drills & trainings, appropriate records are available.

Information to prepare for inspections

ISM – General Safety

Organizational Drills & Training

Objectives

Proper behaviour in an emergency also requires

- good organization
- good preparation
- well-maintained equipment

Inspectors will also look for these points in particular.

Therefore, inspectors examine existing postings and records such as

- muster lists
- fire & safety plan
- labels & placards
- logs of planned maintenance systems, shore-based service records
- logs of drills & trainings.

Together with the general impression and results of direct interviews, which also give an indication of the crew members' level of familiarization and understanding of the company's procedures, a picture emerges.

Avoid the impression of poor organization, as this would prompt an inspector to carry out a deeper and more extensive review.

Unintentional Negligence

Some of the regularly detected deficiencies are caused in everyday life by small administrative negligence, e.g. an outdated list that was accidentally not removed. Even if such a deviation could only have a limited impact on safety, administrative matters must be regularly and carefully reviewed – and corrected immediately. If an inspector notices one, correct it immediately on site!

Need advice?

BG Verkehr - Ship Safety Division

ISM/ILO ✉ ism-mlc@bg-verkehr.de
 Nautical ✉ nautik@bg-verkehr.de
 Machine Dep. ✉ maschine@bg-verkehr.de

Checks on board: Notes on selected references

01. Muster List	SOLAS III/8
02. Muster List	SOLAS III/8, 37
03. Muster List	SOLAS III/8, 37
04. Muster List	SOLAS III/8, 37
05. Muster List	SOLAS III/8, 37
06. Training Manual	SOLAS II-2/15.2, III/35
07. Training Manual	SOLAS II-2/15.2, III/35
08. FSOB	SOLAS II-2/16.2
09. F&S Plan	SOLAS II-2/15.2.4, Pax 15.3.2
10. F&S Pl. Access	SOLAS II-2/15.2.4.2, Pax 15.3.2
11. F&S Pl. Doors	SOLAS II-2/15.2.4, Pax 15.3.2
12. Report Defects	SOLAS I/11
13. Mainten. Manual	III/20, III/36, MSC.1/Circ.1206/Rev.1
14. Plan Mainten.	SOLAS II-2/14, MSC.1/Circ.1432, ISM 10
15. Mainten. Plann.	SOLAS II-1/3-9, II-2/14, III/20, III/36, MSC.1/Circ.1206/Rev.1 MSC.1/Circ.1432, ISM 10
16. Overdue Jobs	ISM 10
17. Records	SOLAS II-2/14, III/20, III/36
18. IMO Label	SOLAS II-2/10.10.3, III/7.2.2, 9.2, 11.5, 20.10, II-2/13 (Pax)
19. IMO Label	see No.18
20. Operating Instr.	SOLAS III/9
21. Escape & Exit	SOLAS II-1/42 (Pax), 43 (Cargo), II-2/13, II-2/14, III/11
22. Escape & Exit	SOLAS II-2/13, II-2/14
23. Safety Store	SOLAS II-2/10.3
24. Control Stn.	SOLAS II-2
25. Drill Plan	SOLAS III/19.3, 19.4, 19.5, ISM 8
26. Drills Conducted	SOLAS II-2/15.2.2, III/19.3, 19.4, 19.5
27. Drill Locations	SOLAS II-2/15.2.2, III/19.3.5, 19.4
28. Drill & Readiness	SOLAS II-2/14, III/19.3.5, III/20
29. Drill Lifeboat	SOLAS III/19.3.4, MSC.1/Circ.1206/Rev.1
30. Drill Rescue B.	SOLAS III/19.3.4
31. Enclosed Space	SOLAS III/19.3.3, 19.3.6
32. Steering Gear	SOLAS V/26.4
33. Recovery Pers.	SOLAS III/17-1, MSC.1/Circ.1447
34. Em.Towing	SOLAS II-1/3-4, MSC.1/Circ.1255, ISM 8
35. SOPEP/SMPEP	MARPOL I/37.1, ISM 8
36. Cargo-related	ISM 8
37. Others (ISM)	ISM 8

Common deficiencies noted

Muster List

- Not updated (invalid crew figures)
- Duties not described
- Persons responsible maintenance and readiness of FFE/LSA are not identified
- Persons have assigned duties but no STCW CoC
- Does not correspond with instruction of the ISM emergency plan

Manuals, Plans, Instructions, Signs

- Training manual not available
- Training manual available but generic and not ship-specific (i.e. referring to the equipment / installations available on board) / not considering the 18 sub-requirements of SOLAS III/35.3
- Fire safety operational booklet not available or crew not familiar with the content and instructions
- Fire control & safety plan inconsistent with as-is installation / not updated / missing at access area
- Responsible officers and those with related duties are not aware of or not familiar with the information provided by the fire control plan or booklet.
- Maintenance manual and information and instructions required by SOLAS are not available
- Manual, information or instructions not in a language understood by the crew
- IMO label / placards missing
- Escape routes, exits or stations not marked

Drill & Training

- Fire and safety drill not conducted as planned & required
- Fire drills are not carried out in different locations
- Not all fire and safety equipment is subject to drills & training every two months
- CO₂ fire suppression system: no records of drills or training events at intervals not exceeding two months
- Poor communication during drill
- Poor enclosed space rescue drill, drill does not comply with requirements of SOLAS III/19.3.6
- Poor steering gear drill / drill failed / communication not available
- Abandon ship drill does not comply with requirements of SOLAS III/19.3.4 / poor drill
- Fire drill conducted but not in accordance with vessels own ISM emergency plan

Common grounds for PSC detention

- The effectiveness of the life-saving equipment or fire-fighting equipment is not guaranteed due to the poor state of maintenance and can endanger the crew during drills and in an emergency.
- The crew is not familiar with the essential procedures for the various emergencies on board.
- Elementary safety drills and trainings were not carried out regularly.
- Emergency exits and escape routes cannot ensure safe escape in an emergency.

Further information that may be of interest

Procedures for Port State Control, 2021

Extracts of IMO Res. A. 1155(32)

Muster List

The PSCO may verify whether the muster list shows the duties assigned to the different members of the crew and specifies which officers are assigned to ensure that life-saving and fire appliances are maintained in good condition and are ready for immediate use.

The PSCO may determine if the crew members are aware of their duties indicated in the muster list and that they are familiar with the duties assigned to them and are aware of the locations where they should perform their duties. This is done by asking the crew relevant questions prior, during or after a drill. When witnessing a drill, the PSCO observes that the crew follow what is required of them by the muster list.

The PSCO may ensure that muster lists are made public throughout the ship, including the navigational bridge, the engine-room and the crew accommodation spaces.

The PSCO may verify if the muster list specifies the substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions.

To determine whether the muster list is up to date, the PSCO may require an up-to-date crew list.

Manuals

The PSCO may verify if LSA training manuals and fire safety training manuals - including fire safety operational booklet - are provided in each crew mess room and recreation room or in each crew cabin and if they contain instructions and information, in easily understood terms illustrated wherever possible, on the appliances / equipment provided in the ship (check if general manuals are made ship-specific).

The PSCO may verify if instructions for onboard maintenance of life-saving appliances and fire-fighting equipment are available and used and in a language understood by the crew.

Fire Control Plan

The PSCO may determine / verify:

- If a fire control plan or booklet is provided, and whether the crew members are familiar with the information given.
- That fire control plans are permanently exhibited. Alternatively, booklets are supplied to officers and a copy is available on board in an accessible position.
- Plans and booklets are kept up to date, any alterations are being recorded therein as soon as possible.
- That the responsible officers and those with related duties on the muster list, are aware of the information provided by the fire control plan or booklet and how to act in case of a fire.
- That the officers in charge of the ship are familiar with the principal of the various fire sections and the means of access to the different compartments.

Maintenance

The PSCOs may verify if instructions concerning the maintenance of equipment and installations on board

- for the fighting and containment of fire,
 - for life-saving appliances and other safety equipment
- are available and in a language understood by the crew.

The PSCO may determine if crew members are able to understand the information given in manuals, instructions, etc. relevant to the safe condition, and if they are aware of the requirements for maintenance, periodic testing and recording of logbook entries.

Drill & Training

The PSCO may determine or verify various conditions:

Communication

Crew members are able to communicate with each other safely, especially in emergency situations. UHF or VHF handheld radios are being used and crew are familiar with and aware of reception dead zones/areas and means of alternative communication methods.

Scenario & Basics

Drills, as far as practicable, are conducted as if there were an actual emergency.

Drills should be carried out at a safe speed.

PSCOs should not expect to see operational drills conducted in real time. During drills, care should be taken to ensure that everybody familiarizes themselves with their duties and with the equipment.

If necessary, drills should be stopped if the PSCO considers that the crew are carrying out unsafe practices or if there is a real emergency

Bridge Team

The PSCO may establish that there are sufficient personnel on the bridge to make decisions, navigate the ship as necessary and deal with the considerable amount of communication that is likely.

The PSCO may verify the master and crew are aware of procedures where shore-based communication and assistance is required and how such communication can be established.

The main points for the PSCO to be satisfied are:

- In the event of a shipboard emergency can the crew organize themselves into an effective team to tackle the emergency?
- Can the crew communicate effectively?
- Is the master in control and is information flowing to/from the command centre?
- In the event of the situation getting out of hand can the crew safely abandon the ship?
- Are crew members familiar with their duties and the proper use of the ship's installations and equipment?

Guidance to PSCO

Initially, the PSCO clearly explains to the master exactly what is required and expected during the drill, bearing in mind there may be language difficulties. PSCOs should not be intimidating, not interfere during the drill nor offer advice. The PSCO should stand back and observe only, making appropriate notes. It is important to emphasize that the PSCO's role is not to teach or train but to witness.

Fire drills

One or more specific locations of the ship may be selected for a simulated fire. A crew member may be sent to the location(s) and activate a fire alarm system or use other means to give the alarm.

The PSCO may describe the fire indication to the crew member and observe how the report of fire is relayed to the bridge or damage control centre. At this point most ships will sound the crew alarm to summon the fire-fighting parties to their stations. The PSCO observes the fire-fighting party arriving on the scene, breaking out their equipment and fighting the simulated fire. Team leaders should be giving orders as appropriate to their crews and passing the word back to the bridge or damage control centre on the conditions. The fire-fighting crews are observed for proper donning and use of their equipment. The PSCO may ensure that all the gear is complete. Merely mustering the crew with their gear is not acceptable. Crew response to personnel injuries can be checked by selecting a crew member as a simulated casualty. The PSCO observes how the word is passed and the response of stretcher and medical teams. Handling a stretcher properly through narrow passageways, doors and stairways is difficult and takes practice.

Those crew members assigned to other duties related to a fire drill, such as the manning of the emergency generators, the CO₂ room, the sprinkler and emergency fire pumps, should also be involved in the drill. The PSCO may ask these crew members to explain their duties and, if possible, to demonstrate their familiarity.

Abandon ship drills

The PSCO may require an abandon ship drill for one or more survival craft. The essence of this drill is that the survival craft are manned and operated by the crew members assigned to them on the muster list.

As possible, the PSCO may include the rescue boat(s) in this drill.

SOLAS 1974 chapter III gives specific requirements on abandon ship training and drills which are relevant. The drill should include:

- .1 summoning crew, and passengers where applicable, to the muster station(s) with the required alarm and ensuring that they are aware of the order to abandon ship as specified in the muster list;
- .2 reporting to the stations and preparing for the duties described in the muster list;
- .3 checking that crew, and passengers where applicable, are suitably dressed;
- .4 checking that lifejackets are correctly donned;
- .5 lowering at least one lifeboat after the necessary preparation for launching;
- .6 starting and operating the lifeboat engine;
- .7 operating the davits used for launching liferafts;
- .8 conducting a mock search and rescue of passenger trapped in their staterooms (if applicable);
- .9 giving instructions in the use of radio life-saving appliances;
- .10 testing emergency lighting and low location lights if applicable for mustering and abandonment; and
- .11 if the ship is fitted with marine evacuation systems, exercising the procedures required for the deployment of such systems up to the point immediately preceding actual deployment.

If the lifeboat lowered during the drill is not the rescue boat, the rescue boat may have to be lowered as well, taking into account that it is boarded and launched in the shortest possible time.

The PSCO may verify that crew members are familiar with the duties assigned to them during abandon ship operations and that the crew member in charge of the survival craft has complete knowledge of the operation and equipment of the survival craft.

The number of persons inside the lifeboats during launching for the purpose of a drill should be at the master's discretion, noting that SOLAS 1974 does not require persons in the lifeboat during lowering and recovery. Aim: reduce the risk of accidents during launching and recovery; however, this must be balanced out with the risk of embarking/disembarking while the boat is still in the water, if the boat is to be taken away and run.

The PSCO may verify that each survival craft is stowed in a state of continuous readiness so that two crew members can carry out preparations for embarking and launching in less than five minutes.

Enclosed space entry and rescue drills

The PSCO may require an enclosed space entry and rescue drill to confirm that crew members are familiar with the procedure to enter an enclosed space and to rescue personnel safely.

The PSCO may verify, that crew can demonstrate an enclosed space entry and rescue drill, and can communicate effectively when entering an enclosed space in case of planned entry and/or an emergency situation.

The place of the drill can be selected at an assumed enclosed space. The drill should include checking and use of

- personal protective equipment required for entry;
- communication equipment and procedures;
- instruments for measuring the atmosphere in the space;
- rescue equipment and procedures; and
- instructions in first aid and resuscitation techniques.

Emergency steering drills

The PSCO may require an emergency steering drill to confirm crew members are familiar with the procedure for emergency steering. The PSCO may check the procedure and means of communication at both the navigation bridge and the steering gear room.

The emergency steering drills should include:

- .1 direct control within the steering gear compartment;
- .2 communication procedure with the navigational bridge;
- .3 operation of alternative power supplies (if applicable).

Damage control plan and oil pollution

The PSCO may determine if a damage control plan is provided and whether the crew members are familiar with their duties and the proper use of the ship's installations and equipment for damage control purposes. The same applies with regard to SOPEPs on all ships and SMPEPs where applicable.

The PSCO may determine if the officers of the ship are aware of the contents of the damage control booklet, which should be available to them, or of the damage control plan.

The officers may be asked to explain the action to be taken in various damage conditions and to explain about the boundaries of the watertight compartments, the openings therein with the means of closure and position of any controls thereof and the arrangements for the correction of any list due to flooding.

The officers should have a sound knowledge of the effect of trim and stability of their ship in the event of damage to and consequent flooding of a compartment and countermeasures to be taken.