

## **Guidance on the development of muster lists for passenger ships**

### **Scope of application**

1. This guidance shall apply when developing muster lists for passenger ships. The guidance is intended as a general assisting tool, which can, however, not take account of all the special conditions applicable to a specific ship.

### **Legal basis**

2. All passenger ships with a gross tonnage of or above 20 shall be provided with approved muster lists. Provisions on muster lists are available from Notice B from the Danish Maritime Authority, chapter III, regulations 8 and 53.

### **Approval**

3. The muster list shall be developed and forwarded to the Danish Maritime Authority for approval before the ship is put into service. Muster lists shall be revised each time changes are made to the composition and number of the crew or to the type of ship. Muster lists shall be forwarded to the Danish Maritime Authority, which may subsequently preliminarily approve the muster lists. The final approval of the muster lists can, however, not take place until at the ship's first main survey. Approved muster lists are a precondition for the fixing of the final minimum safe manning. If the revision of the muster lists required by Notice B from the Danish Maritime Authority, chapter III, regulation 53.6, as reproduced below, necessitates changes to the number or composition of the crew, the Danish Maritime Authority shall be informed accordingly.

### **Operational control**

4. Before the ship is put into service, drills shall be held with the crew in accordance with the muster lists in order to demonstrate the applicability of the muster lists in practice.

### **Muster lists**

5. Muster lists shall be in the form of a simple and legible notice and shall, as a minimum, contain the instructions stipulated in Notice B from the Danish Maritime Authority (SOLAS), chapter III, regulation 53, the wording of which is as follows:

#### **“Muster list and emergency instructions**

1. The muster list shall specify details of the general emergency alarm and public address system prescribed by regulation 50 and also action to be taken by crew and passengers when this alarm is sounded. The muster list shall also specify how the order to abandon ship will be given.
2. The muster list shall show the duties assigned to the different members of the crew including:
  - .1 closing of the watertight doors, fire doors, valves, scuppers, sidescuttles, skylights, portholes and other similar openings in the ship;

- .2 equipping of the survival craft and other life-saving appliances;
  - .3 preparation and launching of survival craft;
  - .4 general preparations of other life-saving appliances;
  - .5 muster of passengers;
  - .6 use of communication equipment;
  - .7 manning of fire parties assigned to deal with fires; and
  - .8 special duties assigned in respect to the use of fire-fighting equipment and installations.
- 3 The muster list shall specify which officers are assigned to ensure that life-saving and fire appliances are maintained in good condition and are ready for immediate use.
- 4 The muster list shall specify substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions.
- 5 The muster list shall show the duties assigned to members of the crew in relation to passengers in case of emergency. These duties shall include:
- .1 warning the passengers;
  - .2 seeing that they are suitably clad and have donned their lifejackets correctly;
  - .3 assembling passengers at muster stations;
  - .4 keeping order in the passageways and on the stairways and generally controlling the movements of the passengers; and
  - .5 ensuring that a supply of blankets is taken to the survival craft.
- 6 The muster list shall be prepared before the ship proceeds to sea. After the muster list has been prepared, if any change takes place in the crew which necessitates an alteration in the muster list, the master shall either revise the list or prepare a new list.
- 7 The format of the must list used on passenger ships shall be approved by the Administration. A copy of the muster list shall be forwarded to the Danish Maritime Authority for approval.”

### **Common to all muster lists**

#### **General**

6. When developing muster lists, it shall be ensured that:
- .1 the crew is divided into suitable groups;
  - .2 a manager of each group is appointed;
  - .3 one person is not assigned more tasks than he is capable of performing;
  - .4 the number of crew members is sufficient to search and evacuate the entire ship;
  - .5 the passengers are distributed according to the capacity of the escape routes;
  - .6 the passengers do not return to areas that have already been evacuated; and
  - .7 the passengers are directed to the muster stations and the life-saving appliances.

#### **Graduated crews**

7. If a ship has a minimum safe manning document with a crew graduated according to different passenger numbers, plan shall be available of which rooms are unused and which areas must be searched by the crew.

## **Instructions**

8. Clear instructions shall be available for everyone on board:
  - .1 For the crew in the form of the muster lists. The crew should be furnished with a safety card, clarifying the crew member's functions in relation to the muster list.
  - .2 For the passengers in the form of instructions and illustrations in the relevant languages (folders or notices). Assembly stations and tasks shall be evident from the muster lists.

## **Public address systems**

9. All signals and orders given in connection with the ship's muster lists shall, to the widest possible extent, be followed by instructions and information over the public address system.

## **Structure of the muster list**

### **Overall management of the efforts made**

10. The master shall have the overall management of the efforts made. Normally, the master shall not be assigned any other tasks.

## **Communication**

(Both external and internal communication).

11. External and internal communication shall be carried out by a person with the necessary education and training in radio communication and knowledge of the ship's public address system and portable radios. The person concerned should only to a limited extent be assigned other tasks, such as controlling and monitoring fire detectors, fire control plans, ventilations, watertight doors, stability and damage control plans. An officer should be assigned this task. On international voyages, internal passenger information could be given by an information officer with the necessary language skills.

## **Machinery**

12. The chief engineer has the top management in the machinery space. Where possible, an engineer should be designated to operate the installations and equipment in the machinery space under the management of the chief engineer.

## **Fire muster list**

### **Fire alarm signal**

13. The fire alarm signal consists of an uninterrupted tone given by the ship's fire bell, siren or horn.

## **Main rule**

14. As a general rule, there shall be at least two fire teams, consisting of a smoke-diving team and an attack team.

### **Fire-extinction management**

15. Takes care of the management of the fire-fighting, including any necessary communication in connection with the efforts made.

### **Smoke-diving team**

16. Takes care of the direct fire-fighting and any evacuation of persons from smoke-filled areas. A smoke-diving team shall consist of two persons, both of whom shall have completed a smoke-diving course approved by the Danish Maritime Authority during the last five years.

### **Attack team**

17. Takes care of the indirect fire-fighting, such as the rigging of hoses, cooling of adjoining areas, etc. The team should consist of at least two persons who have completed a fire course approved by the Danish Maritime Authority.

### **Guiding group**

18. The task consists in informing and guiding passengers. In addition, it may consist in assisting injured persons, directing passengers away from threatened areas, etc. The size of the group shall be assessed in relation to each individual ship and the number of passengers carried.

### **Supernumeraries**

(Crew members who are not required according to the ship's minimum safe manning document).

19. To be brought in following a concrete assessment.

### **Evacuation muster list**

#### **Structure**

20. It may be an advantage to divide the evacuation muster list into two parts: An assembly phase and an embarkation phase.

#### **Signal (Assembly order)**

21. In this situation, the main alarm signal shall be used, consisting of at least seven short tones followed by a long tone.

#### **Assembly phase**

22. During this phase, the crew and passengers shall assemble at the muster stations and, if relevant, the clearing of the ship's life-saving appliances may be initiated. If relevant, a rather small attack group

may be maintained the purpose of which is to limit the extent of the damage until everyone has assembled at the muster stations.

#### **Attack group**

23. In order to ensure as much time as possible to control an evacuation, a smoke-diving team and a fire-extinction management may be brought in in connection with reduced fire-fighting or damage control.

#### **Assembly manager**

24. Takes care of the overall management of the assembly phase, including any recording of crew members, counting of passengers and clearing of life-saving appliances.

#### **Advising group**

25. Directs the passengers to the muster stations. The size of the group shall be assessed in relation to each individual ship and the number of passengers carried.

#### **Supernumeraries**

(Crew members not required by the ship's minimum safe manning document).

26. To be brought in following a concrete assessment.

#### **Embarkation phase**

27. During this phase, everyone onboard shall be transferred from the muster stations to the ship's life-saving appliances, and these shall be launched.

#### **Signal (embarkation order)**

28. Normally, the embarkation order will be given over the ship's internal means of communication and public address system. The embarkation order shall be defined in more detail in the ship's muster list as well as in safety-on-board folders or notices.

#### **Embarkation manager**

29. Takes care of the overall management of the embarkation. The task shall be performed in close cooperation with the master of the ship.

#### **Lifeboats**

##### **Manager of the launching at each individual boat station**

30. Following the embarkation manager's order, this person shall take care of the clearing and launching of the boat. Normally, the person is the master of the boat.

### **Boat crew**

31. For each boat, a crew shall be appointed, consisting of a boat master holding a prescribed certificate and two deckhands. The master of the boat shall have a substitute, who may be one of the two deckhands. The substitute for the master of the boat shall also hold a prescribed certificate. One member of the boat crew shall be capable of operating the motor. If the boat and launching arrangement is arranged for this, the boat crew may consist of a total of two persons.

### **Liferafts**

#### **General**

32. Liferafts shall be assisted by lifeboats and rescue boats (man-overboard-boats (MOB boats)), which shall inter alia tow the liferafts clear of the ship in distress and keep groups of drifting rafts together.

#### **Liferaft stations**

33. At each liferaft station, there shall be a manager and a number of assistants. The persons manning the liferaft station shall have completed a course approved by the Danish Maritime Authority and be trained in the operation and use of the arrangement.

#### **Manager at the liferaft station**

34. Operates the launching arrangement following the embarkation manager's order and ensures that the raft is correctly operated. Liferafts capable of being lowered shall always have on board a liferaft master. As regards liferafts to be thrown overboard and rafts for the MES system, applications may be filed for the master of the raft to be responsible for a group of rafts.

#### **Liferaft master**

35. Masters of liferafts shall be crew members who have completed approved safety training. Normally, the liferaft master will be assisting when launching the liferaft.

#### **Assistant**

36. The task of the assistant shall inter alia be to 1) launch liferafts, 2) launch evacuation ladders and 3) guide the passengers.

#### **Liferafts thrown overboard**

37. For each liferaft station, a manager shall be appointed who shall be the raft master in the last liferaft as well as a number of assistants, the number of which corresponds to the remaining number of rafts. The manager and the assistants shall have completed a safety course approved by the Danish Maritime Authority.

### **Liferafts capable of being lowered**

38. For each liferaft station, a manager shall be appointed who shall operate the crane and be the master of the last liferaft. In addition, a number of assistants shall be appointed, the number of which corresponds to the remaining number of rafts. The manager and the assistants shall have completed an approved safety course.

### **MES stations**

(Marine Evacuation Systems).

39. For each MES, a MES manager, an assistant for guiding the passengers and two platform operators shall be appointed. The entire MES crew shall have completed an approved safety course as well as a course in the use of the MES system.

### **Man-overboard muster list**

#### **General**

40. The man-overboard muster list is not mandatory, but is developed for most passenger ships.

#### **Signal**

41. As the signal for initiating the muster list, the Morse signal for the letter “O” should be chosen, which means “Man-overboard” according to the one-letter-signals of the International Code of Signals. The signal consists of three long tones given by a whistle, fire bell or similar sound signaling device.

#### **Lookout**

42. Crew members should be stationed immediately at suitable observation posts with the task of keeping a lookout for or maintaining eye contact with the person in the water.

#### **Launching**

43. A crew member shall be appointed whose task is to manage the launching of the MOB boat. This person clears the boat, performs the launching and retrieval of the boat and communicates with the master of the boat and the master of the ship.

#### **Boat crew**

44. The persons concerned should be members of the operational crew with in-depth knowledge of the operation of the MOB boat. The master of the boat shall be furnished with equipment for communicating with the embarkation manager.

### **The life boat is used as a MOB boat**

45. The boat shall be manned with at least three persons since it often has a large freeboard and it is, therefore, problematic to operate the boat while rescuing a person from the water.

### **MOB boat designed for the purpose**

46. It is acceptable that two persons make up the crew in connection with the rescue of persons who have fallen overboard since this type of boat has a smaller freeboard as well as improved manoeuvrability.

### **Experience gained with the guidance**

47. In order to keep this guidance relevant and useable guidance, users are urged to inform the Danish Maritime Authority about the experience gained with it and about any suggestions for improvements of the guidance.

### **Annexes**

- Annex 1** Table with guidance about the minimum number of crew members at the various functions in the muster lists for a rather large passenger ship
- Annex 2** Example of form for muster lists used by a major Danish passenger ship company
- Fire muster list
  - Evacuation muster list
  - Man-overboard muster list

### Muster lists

The table below provides guidance about the minimum number of crew members at the various functions in the muster lists for a major Danish passenger ship. However, the actual number of crew members will depend on the type, size and trade area of the specific ship.

Function	Number of crew members
Communication	An officer should be appointed for this task. On international voyages, it could be an advantage if an information officer with the necessary language competences provides internal passenger information.
Machinery	Chief engineer and engineer officer
Fire muster list	Attack team consisting of at least two crew members Smoke-diving team consisting of at least two crew members
Search and rescue Lifeboats and MOB boats	Number of crew members depends on the conditions of the specific ship Two crew members in each boat as well as one embarkation manager
Liferafts thrown over board	One crew member per liferaft. Ships engaged on voyages not more than 20 nautical miles from the nearest coast may be granted permission to deviate from this requirement in special circumstances and following a specific assessment. In these cases, a raft manager shall be appointed for each distinct group of rafts (e.g. two persons per ten rafts).
Rafts for more than 50 persons	Two crew members per raft. In addition, there shall be one crew member for providing assistance at each evacuation ladder. (Can, for example, be the master of the last liferaft).
Liferafts capable of being lowered	One crew member per liferaft
Marine Evacuation System (MES system)	One crew member as the manager at the MES system One crew member for releasing the liferafts Two crew members on the platform

M/F \_\_\_\_\_  
**Fire muster list**

**Signal:** Uninterrupted bell ringing

**Supernumerary personnel:**

Supernumerary deck personnel assemble \_\_\_\_\_ disposable to the master of the ship

Supernumerary engine personnel assemble \_\_\_\_\_ disposable to the chief engineer

Supernumerary catering personnel assemble according to the safety card

( ) = Substitute

WT = Walkie-talkie to be brought along

Master Chief officer	WT	Top manager of all on-board operations
Bridge group Meeting place: Forepart of bridge		
		Task
First mate	WT	Communication, external/internal
		Fire control plan Stability monitoring
		Guides passengers in module 1 Disposable to master of ship
Machinery group Meeting place: Machinery control room		
		Task
Chief engineer (Engineer officer, class 1)	WT	Top manager in machinery space
<b>Fire manager group</b> Meeting place in case of fire outside machinery space:		
Chief officer (First mate)	WT Fire place	Engineer officer, class 1 WT (Engineer officer, class 2)
		Task
Chief officer	WT	Fire-extinction manager, coordinates efforts and fire-extinction with engineer officer, class 1
Meeting place in case of fire in the machinery space:		
Chief officer (First mate)	WT	Engineer officer, class 1 WT: Fire place (Engineer officer, class 2)
		Task
Engineer officer, class 1 (Engineer officer, class 2)	WT	Fire-extinction manager, coordinates efforts and fire-extinction with chief officer

Fire group		
Meeting place _____		or following order over the public address system bringing the necessary equipment
Attack team		Task
Operation		Rigs hoses, starts extinction following order
Operation		Rigs hoses, starts extinction following order
The attack team can, when the smoke-diving team has been brought in, don smoke-diving equipment and be brought in as a smoke-diving team		
Operation		
Smoke-diving team		
Operation		Smoke-diver – hose manager Smoke-diving equipment no. _____
Operation		Smoke-diver – hose manager Smoke-diving equipment no. _____
If a machinery space fire is considered un-fightable, CO <sub>2</sub> is released in accordance with the instructions		
When the CO <sub>2</sub> alarm sounds, the entire engine crew meet at the CO <sub>2</sub> control station in _____		

## Guiding group

Safety crew

### Meeting place: In accordance with safety card

Safety person: Following order, the passengers are directed away from threatened areas.

The safety person with the lowest number in the modules is the manager and the connecting link to the fore-part of the bridge.

Maintenance of fire and safety equipment:

The chief officer shall be responsible for ensuring that all on-board life-saving equipment and all fire equipment on deck are kept in good working order and ready for immediate use.

The chief engineer of the ship shall be responsible for ensuring that all fire equipment in the machinery space is kept in good working order and ready for immediate use.

## Evacuation muster list

Assembly phase

Signal: *A sequence of seven or more short rings of the bells followed by a long ring.*

*Listen for an order from the public address system.*

When a mustering signal according to the evacuation muster list sounds, the crew members shall be obliged to:

- warn the passengers;
- carry out rounds/guidance in accordance with the safety card;
- ensure that the passengers are appropriately clad;
- see to it that the passengers don their life-jackets correctly;
- maintain order and discipline in corridors and stairways;
- be of help to the passengers in any possible manner.

The tasks of each individual crew member shall be specified in more detail in accordance with the safety card.

The MOB boat shall be launched and manned according to the master's assessment.

The chief officer shall be in charge of the launching of the MOB boat following the master's order.



In case of fire:		
Engineer officer, class 1 WT (Engineer officer, class 2)	Fire place	Fire-extinction manager
Smoke-diving team 1		
Operation	Fire place	Smoke-diver
Operation	Fire place	Smoke-diver
In case of collision or other loss of ship		
Engineer officer, class 1 WT (Engineer officer, class 2)	Machinery control room	Disposale to the chief officer
Operation	Starboard of bridge wing	Disposale to master of ship
Operation	Machinery control room	Disposale to chief engineer
Module 2:		
Passengers		
	Meeting place	Task
First safety person Manager of the module		Evacuates passengers to
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Module 3:		
Passengers		
	Meeting place	Task
First safety person Manager of the module		Evacuates passengers to
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to

		Hands out life-jackets from cupboard
Module 4: Passengers		
	Meeting place	Task
First safety person Manager of the module		Evacuates passengers to
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Module 5: Passengers		
	Meeting place	Task
First safety person Manager of module		Evacuates passengers to
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands-out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard
Safety person		Evacuates passengers to
		Hands out life-jackets from cupboard

## Evacuation muster list

### Embarkation phase

Signal: *No acoustic signal. Listen for the orders from the public address system or from the embarkation manager.*

The crew shall assemble at the life-saving appliances in accordance with the embarkation phase of the evacuation muster list wearing a crew vest under the life-jacket.

At the master's discretion, each individual life-saving appliance is launched and manned.

Following the master's order, the chief officer manages the launching of the life-saving appliances.

Lifeboats and MOB boats are disposable for towage and retrieval of rafts as well as for assistance of any persons fallen over board.

**Supernumerary personnel:**

Supernumerary deck and engine crew assemble \_\_\_\_\_ disposable to the embarkation manager.

Supernumerary catering personnel assemble according to their safety cards.

( ) = Substitute

WT = Walkie-talkie to be brought along

Launching sequence for life-saving appliances:			
Phase 1.	MOB following order		
Phase 2:	Evacuation ladders and liferafts, number following order		
Phase 3:	Lifeboat no. 1 following order		
Phase 4:	Lifeboat no. 2 following order		
Master (Chief officer)	WT	Top manager of all operations on board	
Meeting place: Forepart of the bridge			
First mate	WT	Communication	
Meeting place:			
Chief officer (First mate)	WT	Embarkation manager	
Phase 1			
Meeting place:	Portside at MOB boat	Meeting place:	Starboard at MOB boat
	WT boat master		WT boat master
	Deckhand	2. Operation	Deckhand
	Lowers	5. Operation	Lowers
Phase 2			
Meeting place:	Portside	Meeting place:	Starboard
Phase 3			
Meeting place:		Starboard at boat 1	
	WT	Boat master	
		Deckhand	
		Deckhand	
		Lowers	
		Brought along in the boat	
		Brought along in the boat	
Phase 4			
Meeting place:		Portside at boat 2	
	WT	Boat master	
		Deckhand	
		Deckhand	
		Lowers	
		Brought along in the boat	
		Brought along in the boat	

**Man-overboard muster list**

Signal 3: 3 long tones given by the typhoon as well as 3 long rings of the bells.

When the signal sounds, the MOB crew assemble at the MOB boat ready for launching, wearing immersion suits.

MOB crew			
First mate	WT	Boat master	
		Deckhand	
Chief officer	WT	Manages the launching	
		Clears and lowers the MOB boat	

In case of MOB muster list, the master takes over the bridge watch and the chief engineer takes over the engine watch.