

MARINE EVACUATION SYSTEM (MES)



COMPONENTS

The MES has 5 main components; (1) the controls (2) the Stowage box, (3) the chute, (4) the raft(s) and the (5) bowing winch.



- The **controls** are used for launching the device in the event of an emergency.



- The **stowage box** is mounted on the deck and contains the chute (when in the stowed position) and the fixed appliances used during the embarkation process, such as a seat and grab rail.



- The **chute** is stored in the stowage box, attached to the ship and life rafts; and facilitates the egress of the persons utilizing the rafts from the ship to the raft(s) below.



- The **raft(s)** are generally 1–4 in number, depending on the particular MES system.



- The **bowing winch** is fixed to the ship and is used to bow in the raft to the ship's side.

MES's are found on some, but not all cruise ships. Although MES's are becoming more popular with new construction, they are not a requirement in place of davit launched life rafts. MES's are generally found on the embarkation deck at the fore and aft most positions on both port and starboard sides of the vessel. Because they serve as a replacement for davit launched life rafts, MES's will be used as a life saving appliance for crew members serving onboard the vessel, with lifeboats being the primary life saving appliance for the passengers. It is important to note though, that the MES may be used for passengers.

The purpose of the MES is to evacuate the maximum number of persons safely in the minimum amount of time. They generally take up very little deck space and may be deployed by as few as one person; as required by LSA code. Chap 6/6.2.2.1.1.

Below are pictures of an MES fully deployed and ready to accept its evacuees.



There are many types of MES's, although each manufacturer may have brand specific names assigned to each of the different models or types; below are common types of MES you may see in the field:



Chute and Dual Chute Systems

Most commonly found on large modern cruise ships, these systems provide fast and easy evacuation and takes up a rather small space when stored on board and are ideal for high sided passenger vessels and provide fast and easy evacuation for even the largest ships.



Mini Chute Systems

The system is especially lightweight and compact, and is fully contained in the stowage unit for installation almost anywhere on board; designed specifically for vessels with low embarkation deck heights.



Slide Systems

Evacuation Slide systems provide rapid evacuation for large vessels and can be installed at extreme fore and aft positions.



Mini Slide Systems

Mini Slide systems are designed specifically for vessels with lower embarkation deck heights in a variety of versions to suit most ferries and super yachts.

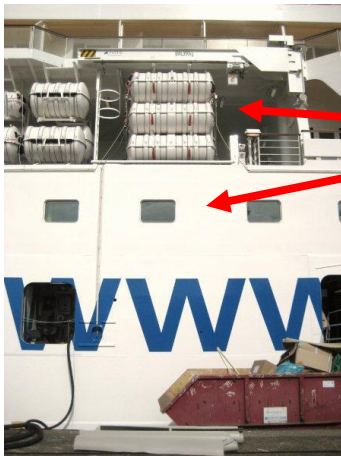


Direct boarding life rafts

The direct boarding alternative is the rapid mass evacuation solution for vessels with low evacuation deck heights; it may be remotely released from the embarkation station.

HOW TO EXAMINE

Your examination of the MES should begin during the hull walk. Check for openings in the ships side between the MES and the waterline; this means all openings in the ships side, even windows/portholes. There should be no openings, if openings in the ships side are identified during the hull walk, you should plan on discussing this with the captain during your opening meeting. Discuss if equivalent arrangements exist that have been accepted (in PIC1 below flag state approved the opening, because the window was A-60).



The MES in its stowed position; notice its position directly over the "opening".

PIC.1

During your document check you will need to verify additional requirements have been met for the MES. This involves verifying two individual requirements. Reference SOLAS chapter III/20.8.2 "Each system must be deployed rotationally at least once every 6 years. This schedule is at the discretion of the company. Additionally; per SOLAS Chapter III/19.3.3.8 "Every system party member (assigned crew member) shall be involved in further training by way of an actual deployment, whether it be onboard or at a offshore training facility once every (24) months". This training may be combined with the required deployments. Verify that the crew members who are assigned to the MES have this practical experience and have participated in a deployment. Remember this is "as far as practicable"

During your deck walk, while on the embarkation deck, pay attention to the control box ensuring it is free of any obstructions that could limit the use of or restrict crew access to the controls. For example: (1)locks installed on the control box to prevent unauthorized access, (2)equipment bags for the MES teams or (3)general stowage in way of the controls. Examine the bousing winch, does it appear to have been maintained, is heavy corrosion present? If you feel its operability is in question, ask the accompanying officer to verify its operability; it should be free moving. The rafts used in conjunction with the MES are subject to the requirements of the LSA code, Chapter 4, section 4.1 and 4.2. Examination requirements are In accordance with SOLAS chapter III/20.8 and Chapter 6 of the LSA code, 6.2 covers the MES specifically and in detail.

During the fire and abandon ship drill portion of your exam it should be witnessed that, according to SOLAS chapter III/19.3.3.8 "drills shall include exercising of the procedures required for deployment up to the point of actual deployment by the system party assigned to the MES." Ask the system party to explain the system to you, have them identify the main components of the system and there function.

Here is a scenario to think about.

You may encounter a situation where a lifeboat is removed for planned (or unplanned) maintenance. Rather than reduce passenger capacity on board, the company reassigns the passengers from the missing lifeboat to an MES. Of course, this arrangement is (and will need to be) approved by the flag administration. But, realize that for a passenger, stepping into a lifeboat is one thing; stepping into a vertical chute with up to a 5 story drop can be an even more frightening proposition. As such, there are practical operational issues you may want to consider discussing with the crew:

- How/when are the passengers that are assigned to the MES notified?
- Has the muster station assignment methodology changed to the point of impacting existing evacuation signs?
- How does the system party handle and account for passengers that refuse to go down the chute; and, how does the ship's crew overall address accountability issues associated with this potential?
- Is this possibility addressed in the ship's SMS?
- Are the MES system party members trained for this? You should question them in this light during the abandon drill.
- Has this drill scenario been run before whether tabletop or practical?