



**REPUBLIC OF
THE MARSHALL ISLANDS**
MARITIME ADMINISTRATOR

Marine Notice

No. 7-041-1

Rev. Jan/2026

**TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF
MERCHANT SHIPS, AND RECOGNIZED ORGANIZATIONS**

SUBJECT: Entering Enclosed Spaces - Safety Precautions

- References:**
- (a) **SOLAS**, *International Convention for the Safety of Life at Sea, Consolidated Edition 2024*
 - (b) **IMO Resolution [MSC.581\(110\)](#)**, *Revised recommendations for entering enclosed spaces aboard ships*, adopted 27 June 2025
 - (c) **IMO Circular [MSC.1/Circ.1401](#)**, *Guidelines for tank entry for tankers using nitrogen as an inerting medium*, issued 09 June 2011
 - (d) **IMO Circular [MSC.1/Circ.1477](#)**, *Guidelines to facilitate the selection of portable atmospheric testing instruments for enclosed spaces as required by SOLAS Regulation XI-1/7*, issued 09 June 2014
 - (e) **IMO Circular [MSC.1/Circ.1561](#)**, *Unified interpretation of SOLAS Regulation XI-1/7*, issued 28 November 2016
 - (f) **IMO Circular [MSC.1/Circ.1581](#)**, *Unified interpretation of SOLAS Chapter II-2*, issued 16 June 2017
 - (g) **RMI [Maritime Regulations](#)** (MI-108)
 - (h) **RMI Marine Notice [2-011-14](#)**, *Maintenance and Inspection of Fire Protection Systems and Appliances*

PURPOSE

This Marine Notice (MN) establishes the Republic of the Marshall Islands (RMI) Maritime Administrator's (the "Administrator") requirements and elaborates on safety standards that must be followed by personnel entering enclosed spaces onboard ships. These requirements are necessary because lives continue to be lost by personnel entering shipboard spaces where the atmosphere is oxygen-depleted, oxygen-enriched, toxic, or flammable. This MN includes the revised recommendations for entering enclosed spaces aboard ships, as adopted by the International Maritime Organization (IMO) Resolution [MSC.581\(110\)](#) and supersedes Rev. Aug/2019.

APPLICABILITY

This MN is applicable to all RMI-flagged vessels to which the International Convention for the Safety of Life at Sea (SOLAS) applies, including Commercial Yachts and Yachts Engaged in Trade of 500 Gross Tons (GT) and over, and all Passenger Yachts.

DEFINITIONS

Enclosed space means a space which may contain a hazardous atmosphere or lack of oxygen and has any of the following characteristics:

- limited openings for entry and exit;
- inadequate ventilation; or
- not designed for continuous human occupancy.

This includes but is not limited to spaces that are diverse in their characteristics such as cargo holds, bilge spaces, ballast and other tanks, pump-rooms, chain lockers and engine crankcases.¹

Responsible person means a person in a management level on board a ship (e.g., Master, chief mate, chief engineer officer or second engineer officer) of competency and authorized by the shipping company to permit entry into an enclosed space.²

REQUIREMENTS

1.0 Safety Strategy (Instruction, Training, and Drills)

- 1.1 The importance of regular instruction, training, and drills in the proper methods of enclosed space entry and rescue operations cannot be over-emphasized. To maintain a high level of personnel safety measures on RMI-flagged vessels, ship owners and operators must adopt a comprehensive safety strategy to prevent accidents while entering enclosed spaces.
- 1.2 The strategy must give full consideration to the IMO's recommendations for entering enclosed spaces aboard ships contained in Resolution [MSC.581\(110\)](#) and must be incorporated into the Safety Management System (SMS), as appropriate. Tankers using nitrogen as an inerting medium must also give full consideration to the guidelines of IMO Circular [MSC.1/Circ.1401](#) while developing their SMS.

¹ In accordance with IMO Resolution [MSC.581\(110\)](#).

² In accordance with IMO Resolution [MSC.581\(110\)](#).

- 1.3 The strategy must be ship-specific and must establish safety instructions and training initiatives to emphasize proper utilization of personal safety equipment and procedures. Safety instructions and training must consider and include a review and briefing of the following primary mistakes made by personnel that have led to casualties:
- .1 entering an enclosed space without advising other persons of their intent;
 - .2 entering an enclosed space without ensuring the space is adequately ventilated; and
 - .3 attempting to enter an enclosed space to give aid to a person or persons inside the space, without first taking the necessary safety precautions.
- 1.4 The safety strategy must also require crew members with enclosed space entry or rescue responsibilities to participate in periodic enclosed space entry and rescue drills to be held on board at least once every two months, according to the requirements of SOLAS Regulations III/19.3.3 and III/19.3.6 and RMI [Maritime Regulations](#), §7.41.7. These drills must be planned and conducted in a safe manner, taking into account, as appropriate, the guidance provided in IMO Resolution [MSC.581\(110\)](#) and must include the following exercises:
- .1 checking and use of personal protective equipment required for entry;
 - .2 checking the use of communication equipment and procedures;
 - .3 checking and use of instruments for measuring the atmosphere in enclosed spaces;
 - .4 checking the suitability, including length, of sampling hoses of portable detectors for gas measurement at all levels in double bottom spaces;³
 - .5 checking and use of rescue equipment and procedures;
 - .6 calibration of instruments in accordance with the manufacturer's instructions, either on board or ashore; and
 - .7 instructions in first aid and resuscitation techniques.

³ This is a National requirement based on SOLAS Regulation II-2/4.5.7 which addresses arrangements for gas measurement in double-hull and double-bottom spaces.

- 1.5 The Master and Safety Officer must review periodically the safety instructions which have been issued by the shipowner and make them available in sufficient numbers on board for all personnel to have their own copy.
- 1.6 Every crew member, upon joining the vessel, must be given instructions which must include, but not necessarily be limited to, the risks associated with enclosed spaces and the onboard procedures for safe entry into such spaces which should take into account, as appropriate, the guidance contained in IMO Resolution [MSC.581\(110\)](#).

2.0 Authorization of Entry

No person must open or enter an enclosed space unless authorized by the Master or the nominated responsible person and unless the appropriate safety procedures laid down for that particular ship have been followed. See IMO Resolution MSC.581(110), Appendix 2 for an example of an enclosed space entry permit.

3.0 Ventilation of Spaces

- 3.1 Enclosed spaces must be assumed to be incapable of supporting life and must be well ventilated naturally or mechanically for a period sufficient to achieve an acceptable level of oxygen as determined by testing before entry into the space may be permitted.
- 3.2 Appropriate testing of the atmosphere of a space must be carried out with properly calibrated equipment by persons trained in the use of the equipment. The manufacturer's instructions must be strictly followed. The testing must be carried out before any person enters the space and at regular intervals thereafter until all work is completed (refer to IMO Resolution MSC.581(110), §7.2).
- 3.3 Where appropriate, the testing of the atmosphere of a space must be carried out at as many different levels and areas as is necessary to account for gas stratification, and obtain a representative sample of the atmosphere in the space. In some cases, it may be difficult to test the atmosphere throughout the enclosed space without entering the space (e.g., the bottom landing of a stairway or complex areas of the structure within the space) and this must be taken into account.
- 3.4 After completion of a suitable risk assessment targeted to the space to be entered steady readings of all of the following must be obtained:
 - .1 20.9% oxygen by volume;
 - .2 the level of carbon dioxide has been checked and is less than 0.5% by volume (5,000 ppm);

- .3 less than 1% of lower flammable limit (LFL) on a suitably sensitive combustible gas indicator, where the assessment has determined that there is potential for flammable gases or vapours; and
 - .4 less than 50% of the occupational exposure limit (OEL) of any toxic vapours and gases.
- 3.5 If the conditions in §3.4 cannot be met, additional ventilation must be applied to the space and retesting must be conducted after a suitable interval. Entry must be allowed only after all the above conditions are met. When the atmosphere remains, or is suspected to be unsafe, then additional precautions must be taken to remove the risks.
- 3.6 It should be emphasized that the internal structure of a space, or liquid residues, may present situations where oxygen-deficient areas exist. Even when an enclosed space has been satisfactorily tested and found suitable for entry, there is a risk that oxygen-deficient areas can exist and precautions must be taken. This is especially the case where the path of supply and outlet ventilation is obstructed by structural members or liquid residues are still present.
- 3.7 Oxygen-rich and oxygen-deficient atmospheres both present serious risks. For example, oxygen enrichment will increase the flammability of clothing and other combustible materials. Conversely, a relatively small reduction in the oxygen percentage can lead to impaired mental ability, and can adversely affect those with pre-existing medical conditions, including respiratory infections, asthma, etc. The effects are very rapid and generally there will be no warning to alert the senses. This can happen even in circumstances where only a person's head is inside a confined space. Very low oxygen concentrations can lead to unconsciousness and death.

4.0 Cargo Pumprooms

- 4.1 In tankers, the officers and pump technicians must be alerted to the danger which will arise if liquid cargo leaks from defective pumps or cargo piping systems and floods the pumproom bilges to a height which could obstruct the inlets of the air exhaust ducts, thus making the pumproom ventilating system ineffective and permitting heavy accumulation of cargo vapors within the compartment.
- 4.2 Constant vigilance must be exercised by personnel on board tankers regarding the asphyxiation and toxic hazards associated with cargo pumprooms if there is any cargo leaks into the pumproom bilges.
- .1 These spaces must be entered only by personnel properly trained and equipped with suitable breathing apparatus for the product involved and the individual must be secured to a lifeline.

- .2 The breathing apparatus must not be removed while within a space containing atmosphere fouled by noxious vapors or gases.

5.0 Breathing Apparatus

- 5.1 A breathing apparatus of an approved type must be carried in all ships in accordance with SOLAS Regulation II-2/10.10. Refer to MN [2-011-14](#), §10.0 which addresses Self-Contained Breathing Apparatus (SCBAs).
- 5.2 In all cases where the atmosphere of a space is known or suspected to be unsafe, persons entering such places must only do so while wearing an approved SCBA, and all such persons must be trained in its use.
- 5.3 Under no circumstances must an Emergency Escape Breathing Device (EEBD) be used to enter an enclosed space in which the atmosphere is known or suspected to be oxygen-depleted, oxygen-enriched, toxic, or flammable.

6.0 Records

The dates when enclosed space entry, rescue drills, and on board training are held must be recorded in the vessel's logbook. If a drill or training session is not held at the appointed time, an entry must be made in the logbook stating the circumstances and the extent of the drill or training session held.