



Human Environment and Transport
Inspectorate
*Ministry of Infrastructure
and Water Management*

ItoS - SOLAS Chapter II-2 - Construction - Fire protection, fire detection and fire extinction

Versie 8

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ItoS - SOLAS Chapter II-2 - Construction - Fire protection, fire detection and fire extinction

Legend / Explanation of abbreviations:

- FSS: International Code for Fire Safety Systems
- IMO: International Maritime Organization
- ISO: International Organization for Standardization
- NSI: Netherlands Shipping Inspectorate
- RO: Recognised Organisation
- SOLAS: the International Convention for the Safety of life at Sea, 1974, and its protocol of 1988: articles, annexes and certificates, as amended

Separation between Engine en Purifier Room

With regard to SOLAS regulation II-2/4.2.5, and taking into account [MSC.1/Circ.1321](#), Part 3, chapter 5, paragraph 3.1, for equipment which treats flammable liquids automatically (e.g. oil fuel purifiers), the NSI may exempt a ship from the requirement to have the purifiers installed in a special space reserved for purifiers, in case the installation of the purifiers in a special space reserved for purifiers is not practicable, provided that a well-founded proposal for an exemption has be forwarded by the RO to the NSI for approval.

Spare charges to be carried on board (lifeboats and tenders)

SOLAS regulation II-2/10.3.3 makes the carriage of spare charges for fire extinguishers mandatory on board of ships. However, lifeboats and tenders are not mentioned in [MSC.1/Circ.1275](#).

Therefore the NSI only recommends that spare charges or additional portable fire extinguishers of the same quantity are provided for the extinguishers placed in lifeboats and tenders (as per SOLAS regulation II-2/10.3.3.1 and SOLAS regulation II-2/10.3.3.2).

It is also recommended by the NSI to use extinguishers of a same type as used elsewhere on the ship where possible. In that case spare charges are provided for such extinguishers without increasing the number of spare charges carried on board.

Reduced number of spare charges for fire extinguishers on board Ro-Ro (passenger) ships

With regard to SOLAS regulation II-2/10.3.3, for a Ro-Ro (passenger) ship undertaking short international voyages, as defined in SOLAS regulation III/3.22, between specified ports (fixed schedule), the required number of spare charges for fire extinguishers may be reduced as follows:

1. spare charges shall be provided for 10% of each type of fire extinguisher capable of being recharged on board;
2. for fire extinguishers which cannot be recharged on board, additional portable fire extinguishers of the same quantity, type, capacity and number as determined for the fire extinguisher capable of being recharged on board shall be provided in lieu of spare charges; and
3. not more than 20 spare charges in total, equally distributed over the available types, are required,

provided that:

- the ship owner or ship operator can demonstrate a contract or other arrangement with a supplier of spare charges;
- the ready availability of service and spare parts can be verified; and
- instructions for recharging are carried on board.

Fixed aerosol fire-extinguishing systems

With regard to SOLAS regulation II-2/10.5 as well as [FSS Code](#) chapter 5, regulation 2.4, and taking into account the 'Revised guidelines for the approval of fixed aerosol fire-extinguishing systems equivalent to fixed gas fire-extinguishing systems, as referred to in SOLAS, for machinery spaces' ([MSC.1/Circ.1270](#), as corrected), the NSI requires the replacement date(s) of the condensed or dispersed aerosol generators:

1. to be verified for non-exceedance at an annual interval, as stipulated in paragraph 7.10 of the annex to the 'Revised Guidelines on maintenance and inspection of fire protection systems and appliances' ([MSC.1/Circ.1432](#), as amended); and
2. to be included in the maintenance plan on board the ship, as referred to in SOLAS regulation II-2/14.2.2.

Additional guidance regarding MSC.1/Circ.1318(/Rev.1)

With reference to SOLAS regulation II-2/14.2 and contrary to what is stated in the introduction to this [MSC.1/Circ.1318/Rev.1](#) (under point 4: "This circular supersedes MSC.1/Circ.1318.", dated 25 May 2021), the NSI considers [MSC.1/Circ.1318](#) still as valid 'Policy Rule' until 31-12-2022 and the revision has been assigned with status 'Policy Rule' from 1-1-2023, superseding MSC.1/Circ.1318 from that date on.

For ships that already have completed the 10 yearly maintenance/pressure testing (due to its 10-, 20-, 30-, 40th yearly term) before 1-1-2023, the regime as per MSC.1/Circ.1318 ("...as a minimum another 10% of its CO2 cylinders will have been subjected to an internal inspection and hydrostatic test") may be applied, however also the revised circular can be applied already.

All Dutch flagged ships shall have to comply with the 10 yearly hydrostatic testing requirements for all¹ CO2 cylinders on board in accordance with MSC.1/Circ.1318/Rev.1, ultimately before the next scheduled dry docking² of the ship; resulting that ultimately 01-01-2028 all ships will comply with revision MSC.1/Circ.1318/Rev.1.

Note: the pressure testing due date is to be related to the age stamped on the bottle or the last 10 yearly inspection/pressure test stamped on the bottle and not the actual age of the ship.

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- 1 The shipowner may contemplate to complete 10 yearly maintenance requirements also for the CO2 cylinders already done in the past in order to align for the full set of bottles, this is however not mandatory.
 - 2 The dry docking period is chosen because the 10 yearly maintenance/pressure testing is usually arranged during this period but also another convenient earlier moment (such as lay-up and/or modification of the ship) shall be used.

Testing and examination of pilot cylinders of fixed gas fire-extinguishing systems

With regard to SOLAS regulation II-2/14.2.1.2, for fixed gas fire-extinguishing systems, the pilot cylinders, including any pilot cylinder of less than 1 kg in weight, shall be hydrostatically tested and internally examined every 10 years, in accordance with paragraph 10.1.1 of 'Guidelines for the maintenance and inspections of fire protection systems and appliances' ([MSC.1/Circ.1432](#), as amended).

Hydrostatic testing of self-contained breathing apparatus cylinders

With reference to SOLAS regulation II-2/14.2.2, the NSI follows the ISO standards in the case of paragraph 9.4 of [MSC.1/Circ.1432](#) on the test interval for hydrostatic testing of self-contained breathing apparatus cylinders, i.e.:

- Cylinders of steel and aluminium: ISO 18119 - hydrostatic testing shall not exceed 5 years;
- Cylinders of composite materials: ISO 11623 - hydrostatic testing shall not exceed 5 years.

However, if the maker recommends a shorter interval, that shorter interval should be followed.

Fire control plans

With regard to SOLAS regulation II-2/15.2.4, the NSI requires:

1. the ship's fire control plans to be approved, and re-approved following an amendment, by the RO on behalf of the NSI;
2. Alternatively, the details, as set out in SOLAS regulation II-2/15.2.4.1, may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy shall at all times be available on board in an accessible position.

Interpretation on ‘designated under-deck cargo space’

SOLAS, regulation II-2/19.3.1.3 reads: Means shall be provided for effectively cooling the designated under-deck cargo space by at least (...).

In continuation of the [earlier information to shipping regarding this topic](#), there are 2 interpretations for the term “designated under-deck cargo space” by the NSI:

- a. A designated complete hold (which is in line with the international interpretation); or
- b. A designated part of one hold, under the following conditions (i – iv):
 - i. When in the designated part of the hold dangerous goods of class 1 are carried, the mechanical ventilation for the entire hold is switched off. This means that no cargoes are allowed to be carried that require mechanical ventilation;
 - ii. The grain bulkhead has to be reasonable gastight and watertight and the proper sealing arrangement is to the (attending) surveyor's satisfaction (new construction only). Sealing arrangements to be submitted to plan approval of the class society;
 - iii. Regulation 19.3.1.3 concerning water supplies shall be complied with for the designated part of the cargo hold. Additional spraying nozzles are directed straight onto the grain bulkhead for boundary cooling; and
 - iv. Dangerous goods and combustible materials have to be stowed at least 3 meters away from the grain bulkhead or an additional grain bulkhead has to be placed at least 1.5 meters away from the grain bulkhead.