

MSC Guidelines for Review of Storage Areas Protected by High Pressure Water Mist Systems

Procedure Number: SOLAS-50

Revision Date: 2015/06/30

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References

- ❑ SOLAS 2004 Cite: II-2/10.6.1.1, FSS Code 7/2.1.1.2
- ❑ SOLAS 2001 Cite: II-2/36.1.2, II-2/12.3

Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center by e-mail or phone. Please refer to Procedure Number: **SOLAS-50**.

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Reference Text

“2.1.1.2 The number and arrangement of nozzles shall be to the satisfaction of the Administration and shall be such as to ensure an effective average distribution of water of at least 5 l/m²/min in the spaces to be protected.”

Guidance

Figure 1, below, provides recommendations for Hi-Fog MIST nozzle placement in store rooms and for the maximum allowed storage height. We consider these general rules, to apply to any approved high pressure water MIST system.

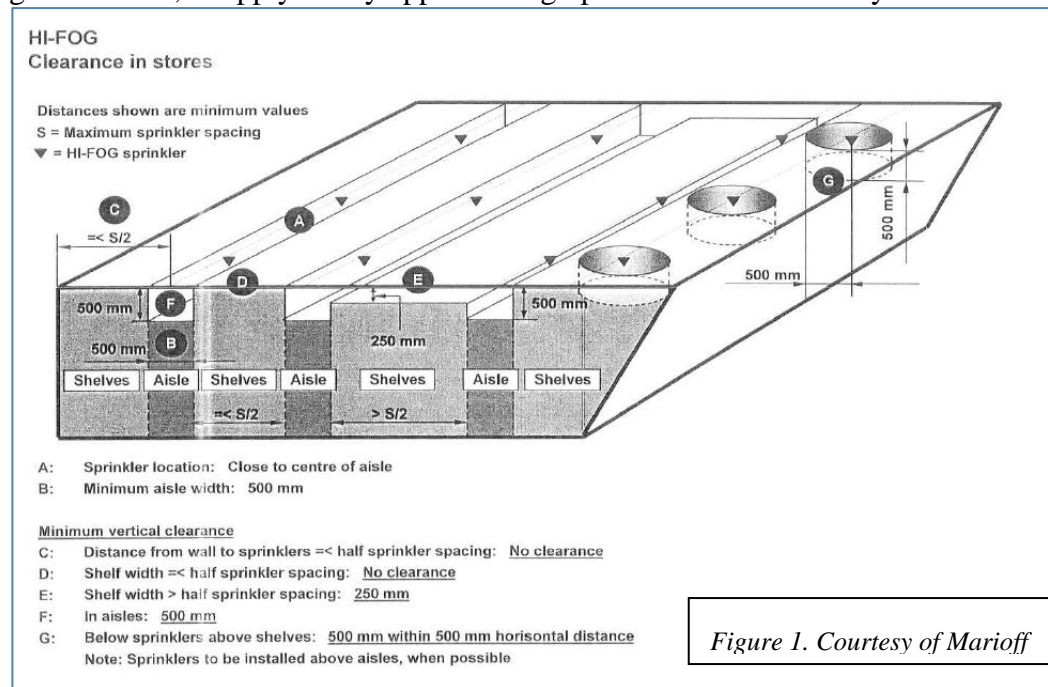


Figure 1. Courtesy of Marioff

1. If MIST nozzles are placed in EACH aisleway created by shelving and the nozzles are spaced within the maximum allow spacing distance (S), determined by the system manufacturer, then storage can extend to the ceiling if the shelf width (D) is at most S/2. If the shelf width exceeds S/2, then the storage is limited to a level 250mm below the bottom of the MIST nozzle assembly.

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2. In areas of fixed shelving where MIST nozzles are not installed in EACH aisleway created by the shelves, the storage height must be limited to a level 500 mm below the MIST nozzle.
 3. In areas where the shelving arrangement is flexible or MIST nozzles are installed without regard to shelving arrangement, the storage height must be limited to a level 500 mm below the MIST nozzle.
 4. In any case, storage should not be placed within 500 mm of the nozzle itself as shown by (G) in figure 1.
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Background

The common practice to limit storage height to a level 500 mm below the deflector plate of a sprinkler head is based on the space needed for the discharge pattern of a standard spray sprinkler. While High Pressure Water MIST systems are considered equivalent to sprinkler systems [IMO A.800(19)], this limitation is overly restrictive in storage areas protected by High Pressure Water MIST systems. This guidance does not supersede more restrictive recommendations that are provided by the MIST system manufacturer.

Disclaimer

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative, you may contact The Marine Safety Center, who is responsible for implementing this guidance.