LASH FIRE

LASH FIRE GUIDELINES

Improvement in currrent signage and marking standards/conditions

Application

The improvement in current signage and marking standards proposed in these guidelines should inform industry actors and regulators on how to enhance management and containment of fire. These guidelines can be used as a reference resource by ship operators and crews.

The guidelines are targeted towards, both newbuilt and existing, roro cargo, ro-pax and vehicle carriers. These three types of ships have been selected to represent most of the ro-ro ships in the world fleet.

Consistency in signage and marking between onboard systems and fire management system interfaces

The guideline proposes to improve consistency in signage and marking by adopting the following requirements for all types of vessels:

CHECK LIST ✔

☐ **Signage and marking of drencher zones** and deck number shall be consistent with information displayed in in the ship's fire management system interface.

☐ **All printed information sources** on board shall have consistent drencher zone and deck references, aligned with signage and alarm system.

☐ **Ambiguous deck names** shall be avoided, as well as mixing reference to deck numbers with reference to names, such as "lower hold".

☐ **Existing ships can conduct a mapping study** to identify actual mismatches between the different marking and signage systems on the ship and various fire management system interfaces. The template on the next page can be used to conduct the mismatches mapping study.

Mapping study template

Purpose
To find mismatches between information/numbering provided by ships' different fire management system interfaces and related marking/signs numbering .

Instructions
1. Prepare a detailed and exhaustive list of all different signs/markings on board as well as every ship's fire management interface.

2. Compare the information/numbering provided in every fire management interface with the related onboard signs and markings.

3. Fill in the table selecting the relevant answers:

• **n/a:** if the interface does not provide information about such sign/marking.

• **C (consistency):** if the information/numbering in the interface does coincide with the related sign/marking.

• **M (mismatch):** if the information/numbering in the interface does not coincide with the related sign/marking. Please, register the information/numbering provided in the interface.

	Alarm panel	Integrated fire manage-ment system	Video monitoring system	Fire suppression system	Printed in-structions	Verbal terminology	Fire plan	
Painted marking on deck/bulk-head								
Sections								
Zones								
Localities								
Fire suppression valves								
Sensors								

NOTES:

NAME OF PERSON (S) INVOLVED (voluntary): ....

NAME OF THE SHIP/LOCATION: ....

DATE AND SIGN: ....

☐ **Solutions based on ship's specific characteristics and needs** should be developed and implemented to align the identified mismatches.

Solutions may encompass:
- the reprinting of printed instructions
- reprograming of fire management system
- the replacement of markings and signs
- the use of colour coding

Two examples

Identified problem:
- Drencher zone information not available on the fire panel.

Suggested solution:
- Reprogramming of the fire panel or adding of an extra column with corresponding drencher zones in the existing list of sensors and ship locations.

Identified problem:
- Information regarding location of CCTV cameras and their visibility angles not available in the printed drawings on the bridge.

Suggested solution:
- Location of CCTV cameras and their visibility angles can be included in the ship drawings displayed on the bridge.

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Easily readable signage and marks standard

**Signs and marks shall be easily identifiable
and interpretable**

☐ **Drencher zones and decks** shall be marked in such a way that fire patrol always, in fully loaded deck condition, shall be able to visually confirm location from any position along the patrol route, allowing for movement of maximum +/-3 m along path.

☐ **CCTV system** shall allow for instant identification of which drencher zones are visible from each camera.

☐ **Size:**
- Minimum size of 500 x 500 mm for deck numbers and drencher zones.
- Frame numbers should correspond with the width of the frame.

☐ **Colour:**
- Red or a combination of red/white.

☐ **Font:**
- Bold Sans Serif.

☐ **Material:**
- Painted and prefabricated sings and markings are permitted .
- Section number signs shall be of photoluminescent material .

☐ **Maintenance:**
- Signage and markings wear and tear resistant.
- Signage included in maintenance schemes.

☐ **Location should be decided based on** an in-situ analysis of typical patterns of crew movement and real use cases.

Furthermore:, the following shall be considered:
- Signs and markings shall be always visible - crew member shall be able, by means of signage and boundary marking only, to determine the exact location in the ship by walking +/- 3 meters along walking route.

- Sign and markings shall not be obstructed by cargo or fixed installations and visible through video monitoring systems.

- CCTV system must allow for instant identification of drencher zone

- Deck and vertical boundaries shall be marked to easily identify the sections of the fixed fire-extinguishing system in closed vehicle, ro-ro spaces and special category spaces with water-spraying systems.

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1. Complying with ISO 15370:2021Ships and marine technology — Low-location lighting (LLL) on passenger ships — Arrangement.
2. Note, wayfinding and orientation for safety reasons shall come above normal customer access wayfinding in the signage hierarchy in ro-pax vessels.