SAFETY SIGN SYSTEMS ONBOARD FERRIES

T-ISS
Safety Suppliers

INTRODUCTION

What is the point of investing in safety equipment without making sure that passengers can find their assembly stations by a clear escape sign system?

According to many regulations, escape signage consist of;

- **Safety Instructions** to explain the LLL and signs and secure an orientation to primary and secondary escape routes
- **Low Location Lighting (LLL)** for an uninterrupted lighted guidance line through all escape routes to assembly stations and embarkation stations
- **Escape signs** to guide all persons onboard to assembly stations or embarkation stations, following the primary or secondary escape routes

SOLAS requires an escape calculations plan for every passenger vessel. This is the basis for the escape plan with the primary and secondary escape routes and the escape sign system.

Signs that simply state 'EXIT' cannot meet the goals of all regulations. SOLAS requires the use of correct symbols along with the wording 'EXIT' or 'Assembly Station'.

T-ISS offers all components for the complete escape sign system. And of course also for all other safety signage such as rescue, firefighting, fire control, warnings, prohibitions and mandatories, inclusive pipe marking and maritime safety posters.

A safety sign system is based on all relevant rules according to SOLAS, IMO, FSS code and the latest ISO standards. We can offer an assessment on site, we can fulfill the complete engineering to a signage and LLL plan, and approval drawings for authorities and classification societies. After this point we proceed to the implementation of the complete system.

SAFETY INSTRUCTIONS

SOLAS Part 1, regulation II-2/13.7.2.2, regulation III-part B. 8.4 and MSC/Circ. 699 requires emergency instructions in cabins, assembly stations and other passenger spaces. From a safety perspective they must be in line with the ship's evacuation analyses and help the persons on board as a preventive measure. The new developed ISO 24409-4 describes the details for these instruction plans, our Safety Instructions are already fully in line with that new ISO standard and all other regulations.

The Safety Instruction sign in a cabin displays the primary and alternative route to the designated assembly station, displayed in both plan view and sideview, emergency instructions, explanation of the escape sign system such as LLL and symbols for primary and secondary escape, and donning instructions for the lifejackets.

The Safety Instructions for the public areas show the 'you are here' position in relation to the assembly stations, embarkation stations, emergency information and near the lifejacket storage areas, the instructions for putting on the lifejackets. This plan also shows in a plan view the positions of the lifeboats, embarkation stations and life jacket stowage areas on the respective decks.

T-ISS can provide the development and drawing work for the Safety Instructions fully in line with the complete escape route system.

They can both be designed in the company's corporate branding guide lines with their logos or in a neutral ISO recommended style.

LOW LOCATION LIGHTING

T-ISS provides Low Location Lighting system for all situations. Both the luxury LED LLL in a variety of profiles as well as the more economic photoluminescent systems.

We are specialists in the project-based implementation of Low Location Lighting systems on passenger ships, both technical and according to the latest IMO and SOLAS regulations and relevant ISO Standards. Additionally, we also perform LLL measurements and certifications.

REGULATIONS AND STANDARDS

SOLAS regulation II-2/13.3.2.5.1 is clear in that the means of escape, including stairways and exits, shall be marked by lighting or photoluminescent strip indicators placed not more than 300 mm above the deck at all points of the escape route. IMO Resolution A.752(18) gives more specific information.

The main goal is that the LLL system provides marking of escape routes in line with the ship's evacuation analysis as given in SOLAS regulation II-2/13.3.2.7. All escape routes should lead to the assembly stations and embarkation station by use of the right symbols.

ISO 15370 describes how to install these products and how to certify and maintain these products of the complete Low Location Lighting system.

MINI SYMBOLS

Whitin the LLL system safety signs for escape and firefighting equipment must be integrated. The escape signs must display both the primary and secondary escape routes and the routes to the embarkation stations with the use of correct symbols.

ELECTRICAL LOW LOCATION LIGHTING

We offer a wide range of profiles to integrate the LED-strip in. Profiles for wall mounting, floor mounting (low and high carpet profiles), from metal skirting boards till system integration into existing wooden wall panels or skirting boards on board.

Power supply units with or without battery backup, able to feed more than 1.000 m of the latest LLL systems. The system is compatible to the most common used LLL systems installed.

PHOTOLUMINESCENT LOW LOCATION LIGHTING

Our LightLine LLL can be provided in PET-X with or without green borders, or in aluminum profiles with PVC insert strips. Of course the products are fully certified.

LightLine Pet-X photoluminescent strips are Non PVC, Halogen-free, flame retardant, UV-resistant and 100% recyclable, and therefore exceeding all current requirements. Our strips have a high luminescence Class XXL backlighting material, which will light up well above the minimum set standards and hereby fully complies with IMO Resolution A. 752 (18) and ISO standard 15370. The material also has a ‘glossy’ finish which is easy to clean and gives it a high quality appearance.

ESCAPE SIGN SYSTEM

From all positions onboard a vessel (inside accommodation, open decks and technical and machinery spaces) both the primary and secondary escape routes must be visualized by the use of correct symbols according to IMO A.1116(30). Escape signage must be a coherent system with mini symbols at LLL, signs at eye height and signs installed at the ceiling. All escape signage must be photoluminescent or electrically illuminated. And at the final positions of the escape routes signs indicating the Assembly station or Embarkation station finish the system.

PHOTOLUMINESCENT ESCAPE SIGNS

All escape routes onboard passenger vessels shall lead to the ship's assembly stations. SOLAS Part 1, regulation II-2/13.7.1.1 and III/11.5 are clear about the requirement that the assembly station symbol from IMO A.1116(30) shall be used. According to the ship's escape plan the primary and secondary escape routes shall be visualized by escape signs, in line with the escape symbols at the LLL and the Safety Instruction's explanation.

ELECTRICAL LED ESCAPE SIGNS

Our Maritime LED escape signs are designed to clearly identify escape routes, executed in a modern design that fits into today's marine architecture. The signs are IP44 protected, CE and RINA approved and have a lifetime of at least 40,000 hours thanks to the special LED technology.

ELECTRIC AND PHOTOLUMINESCENT IN ONE: THE BEST OF BOTH WORLDS

As the first and only one in the market, we have combined two technologies in our LED escape signs; the main source of energy is electricity, but if the power fails due to an emergency, the photoluminescent capabilities of the sign take over. An innovation that makes this the LED escape sign of the future. A clear visibility is guaranteed for more than 3 hours without electrical power.

ENVIRONMENTAL FRIENDLY PVC FREE SIGNAGE

Today most sign makers use PVC, despite the fact that PVC is the single most environmentally damaging of all plastics. PVC contains halogens and their toxicity of smoke is of highest concern within enclosed spaces, which you will find on-board any ship.

PET-X INSTEAD OF PVC

We use a modified 100% recyclable polymer called PET-X, which is free of halogens. We managed to innovate our printing process in such a way that the expected lifetime is up to 5 times longer than the market average. The last upside is the visual appearance, SafeSign signs and Low Location Lighting strips have a high quality glossy finish, which is easy to clean. The use of these new materials and techniques helped us to achieve innovative product which is also more economical and looks much better.

QUALITY OF SAFETY SIGNS

For all safety signs, we use 100% environmentally friendly photoluminescent material which is free of halogens. Our modified PET-X can be used safely anywhere inside and outside onboard ship's and exceeds all required photoluminescence requirements.

5-YEAR WARRANTY

Our PET-X photoluminescent safety signs are UV resistance and equipped with an ultra-strong self-adhesive foam tape. When installed correctly we offer a 5-year warranty even when used outdoors, unlike PVC or other signs which quickly turns yellow.

SAFETY SIGNS

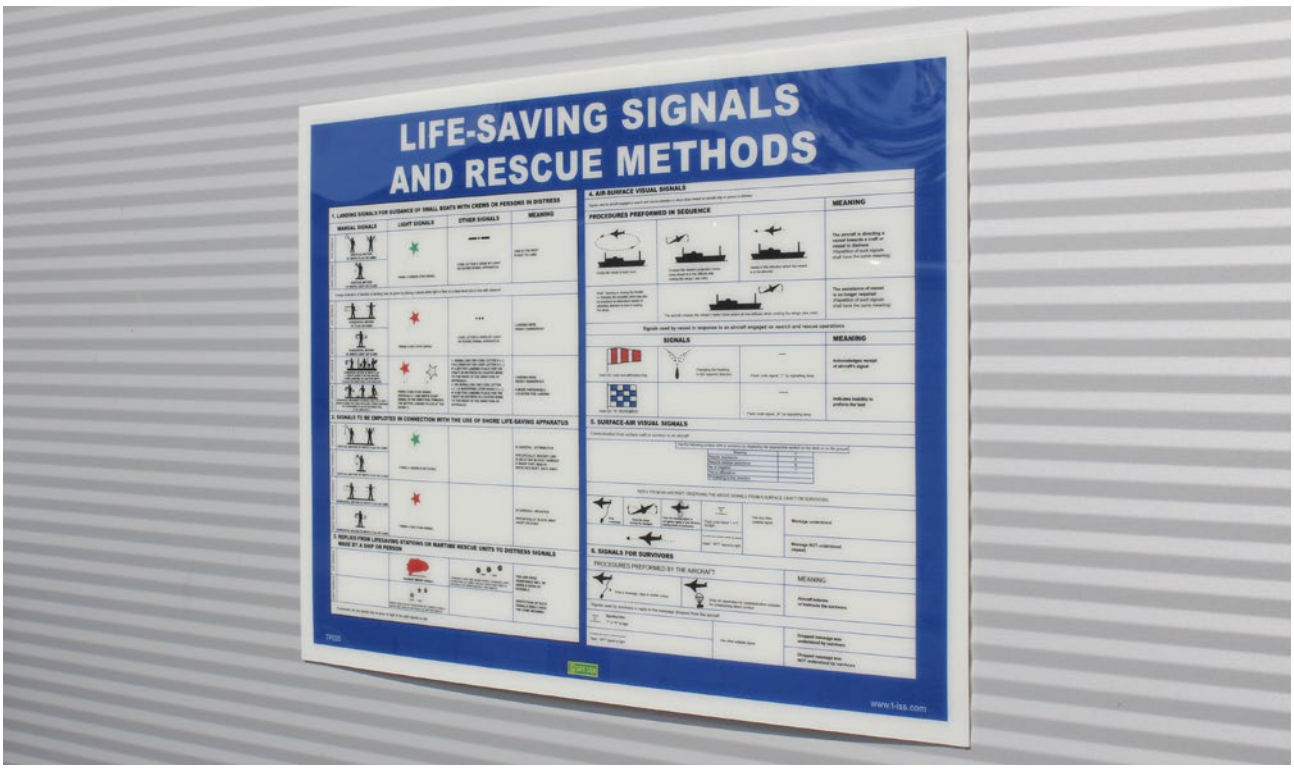
Regulations and laws require more signage than just escape signs.

Signs for firefighting, rescue, fire control and for safety of workers are an important part of safety signage. As signage specialists, we will make sure that this signage will be delivered or is installed with the right symbols and as a coherent whole, in line with the ship's Fire Control and Rescue plan.

We produce all signs in-house, whereby custom made signs in every language are possible. From our involvement in ISO safety sign standardization projects, we can develop all signage according to these standards.
We offer standardized signage products from our IMO catalog in stock, available in PET-X quality.

IMO POSTERS & PIPE MARKING

For a safe and secure operating of the vessel, T-ISS offers IMO Posters with many topics. See our catalogs at TISS.com for the complete program or ask for our catalogs.



Clear pipe marking according to ISO 14726 or ISO 20560-1 prevents accidents in operating the vessel. For European vessel, pipe marking is required by law.

CARDECK SIGNS

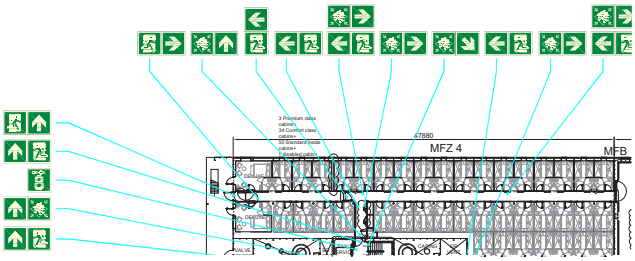
European law requires safety signs for all people onboard, both for crew and passengers such as car drivers.

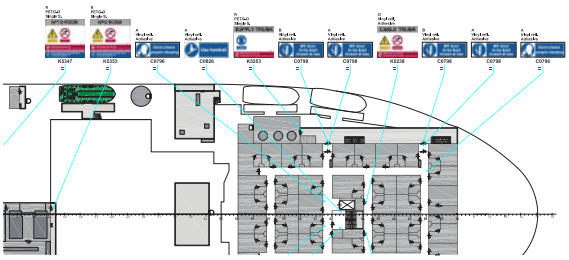
T-ISS provides these signs, which can be tailor made in all languages and symbols according to ISO standards. Company branding elements such as logos and colours can be applied.

PROJECT MANAGEMENT & TURN-KEY SERVICES

Development and installation of an effective and compliant safety sign system in line with your embarkation- and safety plan and safety procedures as well as all regulations and standards has been our core business for many years. The safety of the crew and passengers is our top priority when implementing such a system. In order to implement an effective and compliant safety sign system, we approach each project systematically, based on our main pillar under success: good project management and knowledge of the relevant regulations and standards.

Our skilled workers can provide all types of safety signage, directional signage and other markings, based on an inventory and consultancy process. As an active member of ISO committees for safety signage T-ISS helps to ensure unambiguous use of safety signage.





LLL Measurement & Certification

We are accredited by DNV to execute Low Location Lighting measurement services. As a ferry owner, you need to test all Low Location Lighting systems at least once every five years. Our engineers will test the state and luminance of your systems on-board with fully certified testing equipment. The photoluminescence measurement process as well as equipment are all certified by DNV.

We can provide you with several services, including:

- Photoluminescent Low Location Lighting measurements and tests (DNV certified)
- Electrical Low Location Lighting measurements and tests (DNV certified)
- Low Location Lighting refurbishment or replacement

After the measurements, the engineer will report all readings in a clear overview for Class approval. This includes all the upgrades and / or modifications that, when needed, you need to do to meet the required regulations.

CONTACT INFORMATION

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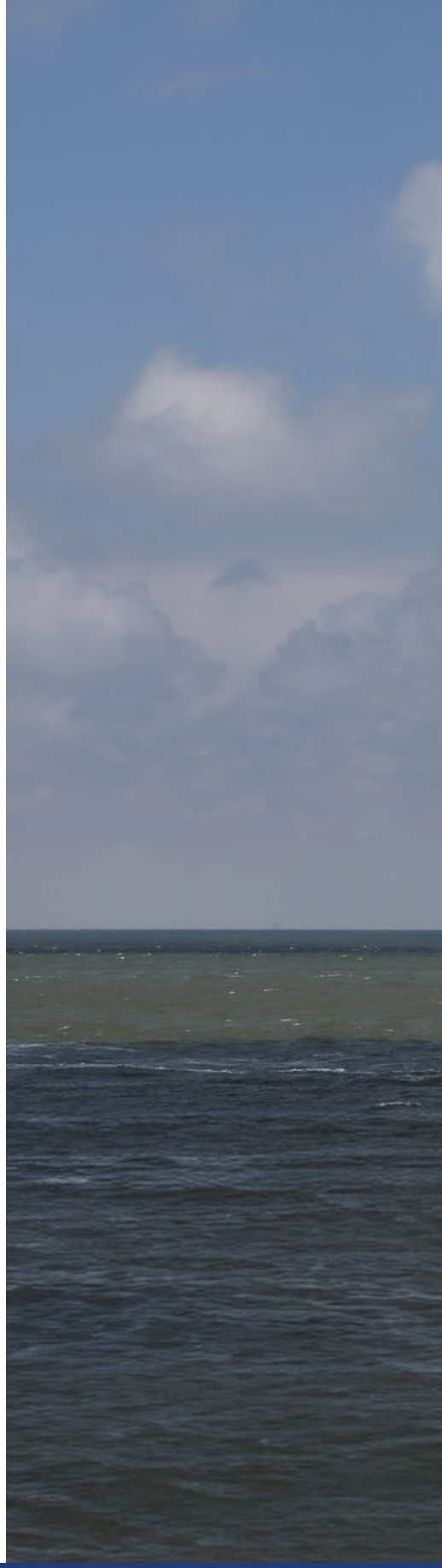

3M™ MCS™ Warranty

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