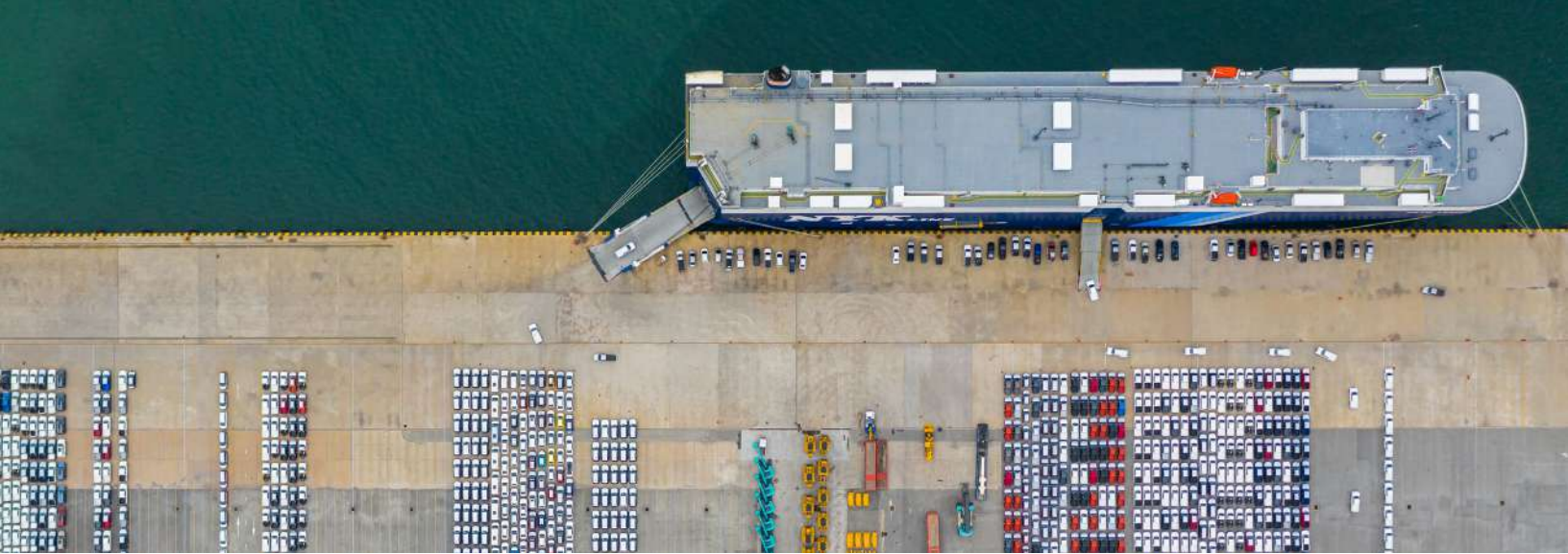




The American Club

Shoreside Firefighters and Vessel Fires





Shipboard fires that occur while a vessel is at the dock will normally involve shoreside firefighters.

Whether the crew intends to fight the fire by themselves or take initial actions while waiting for experienced, contracted marine firefighters to arrive, local firefighters usually respond. It is their community's port and infrastructure, and they are dedicated to ensuring it is not damaged should the vessel fire get out of control. However, local firefighters can't possibly be familiar with every vessel's design and may have little or no training or experience in fighting shipboard fires. Therefore, vessel crews cannot assume that the first shoreside firefighters that arrive are appropriately trained and know how to fight a vessel fire.

Fighting fires on vessels is very different than fighting fires in the land-based structures for which shoreside firefighters are most experienced. For example:

- A steel vessel cannot be vented like a wooden structure;
- Vent fans on vessels must be secured initially, or the forced air will feed oxygen to the fire;
- Firefighting water has to be removed or limited so as to not negatively impact vessel stability that can cause capsizing or sinking; and
- The steel construction of vessels traps and retains heat causing fires to burn significantly hotter than land-based structure fires. Vessel fires have been recorded to reach temperatures above 1000°F (538°C). In contrast, shore-based fires are characterized as "severe" thermal environments for firefighters when temperatures are between 300-400°F (149-204°C).

Additionally, shoreside firefighters may not be familiar with the operation of the vessel's firefighting systems and equipment such as installed CO₂ systems, sprinkler systems, foam systems, water fog systems, and the vessel's fire main and pump arrangement. Shoreside firefighters also may not trust the vessel's equipment and systems, even though use of the vessel's equipment may be the best firefighting approach.



International Safety Management (ISM) Code and U.S. Code of Federal Regulations (CFR) Requirements

The ISM Code requires companies to identify potential shipboard emergency situations and establish procedures to respond to them. Every company identifies a shipboard fire as one of those emergency situations. However, most only include firefighting procedures for the vessel for only the crew, installed firefighting systems, and onboard equipment.

The ISM Code also requires the company to establish programs for drills and exercises to prepare for emergency actions. Those commonly manifest as weekly fire drills conducted on the vessel with only the crew. While those drills are critically important, they rarely include consideration of coordinated actions for those times when shoreside firefighting assistance is available.

Additionally, the U.S. 33 CFR 155 requires vessels carrying oil as cargo and vessels carrying oil as fuel of 400 gross tons or more to identify salvage and marine firefighting services in their vessel response plans. The regulations include a table that specifies the maximum time limit for certain services to arrive onscene. For example, external firefighting teams are required to be onscene within 4 hours if the vessel is at the dock and within 8 hours if the vessel is in a near-shore area. These regulations apply to both U.S. vessels and non-U.S. vessels that operate on the navigable waters of the U.S.





The U.S. regulations also require the salvage and marine firefighting resource providers to be integrated into the company's response organization, and that the vessel response plan include procedures for transferring responsibility for the response activities from vessel personnel to the shore-based incident management team.

Between the ISM Code and the U.S. regulatory requirements, it is clear that the vessel and company must be fully prepared to respond to a vessel fire including while at the dock. The coordination with shore side firefighters is critically important should a fire occur while the vessel is at the dock but is rarely part of a drill or exercise. As experience has shown, the best time to figure out who is in charge and how shoreside and shipboard efforts should be coordinated is before the fire starts, not in the middle of the response to the fire.

Considerations for the Crew

Vessel crews should:

1. Anticipate that local firefighters will respond to a vessel fire when the vessel is at the dock usually before the marine firefighters associated with the vessel response plan arrive onscene;
2. Not assume that local firefighters are experienced fighting shipboard fires, or have any training to fight shipboard fires;
3. Recognize that firefighters will not be familiar with the vessel, its arrangement, and vessel firefighting equipment;
4. Recognize also that firefighters may not be familiar with vessel terminology;
5. Be prepared to work with and cooperate with local agency firefighters even though they may



be inexperienced;

6. Be prepared to work with and cooperate with professional marine firefighters arriving to assist per the vessel response plan; and
7. Still retain significant responsibilities when shoreside firefighters arrive including:
 - Helping them understand the fire control plan;
 - Communicating details of the vessel's arrangement;
 - Identifying locations of remote valves and shutdown switches;
 - Knowledge of the vessel's ventilation system; and
 - Knowledge and status of the vessel's installed firefighting systems and equipment; and
 - Continuing the firefighting effort as directed by the vessel's Master.

Vessel Masters should:

1. Anticipate that local firefighters will respond to a vessel fire when the vessel is at the dock usually before the marine firefighters associated with the vessel response plan arrive on scene;
2. Thoroughly understand the vessel's safety management system (SMS) procedures related to firefighting;
3. Be ready to coordinate and cooperate with shoreside firefighters;
4. Be ready to establish roles and responsibilities with shoreside firefighters;
5. Be prepared to develop one coordinated plan with shoreside firefighters to fight the fire;



and

6. Remember that the vessel's Master does not give up responsibility for the vessel just because marine firefighters are on scene.

Considerations for Management

Whether your vessels trade in the U.S. or not, vessel management should ensure that vessels and crews are prepared to fight a fire that occurs while the vessel is in port. In doing so:

1. Management should consider performing a risk assessment (as specified under Section 1.1.2 of the ISM Code) of their emergency preparedness (as specified under Section 8 of the ISM Code) taking into consideration potential fires that would include to use and management of shoreside firefighting assets.
2. Management should specifically review procedures for the response to a vessel fire while the vessel is in port. That review should evaluate the completeness of procedures for coordination with shoreside firefighters including local firefighters as well as the contracted marine firefighters identified in the vessel response plan.
3. Management should have detailed discussions with their mandated marine firefighting response company related to:
 - Decision-making during the response;
 - Integration into the company's response organization;
 - Coordination with the crew;
 - Coordination with local firefighters;

- The number and capability of required “external firefighting teams”;
 - Plans for drills and exercises.
4. For vessels operating regularly to particular ports whether on liner trades or otherwise, management should consider conducting periodic drills and exercises on fighting shipboard fires on a vessel that is in port. The drills and exercises should be conducted with the company’s designated salvage and marine firefighting service, but also with local firefighters who may be the first responders to arrive on scene. Drills and exercises should:
- Include both local shoreside firefighters and contracted marine firefighting responders;
 - Start with vessel familiarization for the shoreside firefighters that includes a tour of the vessel, locations of installed firefighting systems; location of the international shore connection; location of the fire control plans; locations of emergency shutoffs; and a discussion of how a fire in various places on the vessel would be fought;
 - Be comprehensive enough to include interaction between the vessel crew and the firefighters; and
 - Include decision-making aspects related to how to fight the fire; who is specifically in charge of the firefighting effort, and how that person will coordinate with the Master.

Whenever there is a fire on the vessel, the goals are straightforward – extinguish the fire and minimize the damage without anyone getting hurt. The best way to ensure the goals are achieved if the fire occurs while the vessel is in port is to use the assistance, skill, and resources that shoreside firefighters can provide in cooperation with the Master’s expertise.

When you identify a hazard before something goes wrong...

it’s a Good Catch.

When you stop an operation before something bad happens...

it’s a Good Catch.

When you recognize the need to better coordinate with shoreside firefighters...

that’s a Good Catch, too!





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