

Safety is on the Docket

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Major strides have been made in loading dock safety in recent years, but there's little doubt that the dock remains an extremely busy place. It's also why loading docks present a never-ending safety threat. The same holds true for fast-paced materials-handling environments if old industrial doors are used in place of technically advanced, high-speed doors. Listed below are common safety issues at the dock, as well as other locations of the plant where productivity is paramount; outlined are ways to minimize the risks involved.

Trailer Separation

Some companies use wheel chocks to keep a trailer from moving at the dock during trailer loading and unloading. However, many safety experts and most dock equipment manufacturers agree that chocks offer only minimal protection against trailer movement. The safer option is to use vehicle restraints.

Vehicle restraints that latch on to the rear impact guard (RIG) of a trailer are developed specifically to keep trailers separating from the dock. With the proper vehicle restraint, companies greatly reduce the potential for catastrophic accidents, such as when a trailer pulls away from the dock unexpectedly when a forklift is inside the trailer.

Importantly, not all restraints are alike. A RIG-based restraint with a full rotating hook provides an extremely high level of protection because the hook has the upward reach necessary to wrap up and over the widest range of RIG-shapes and sizes, and hold them firmly in place.



Chronic Safety Issues

Chronic safety issues, such as trailer drop are also a major concern at most docks. Trailer drop describes vertical semi-trailer bed movement that occurs with the weight of lift trucks traveling in and out of trailers. The issue is of particular concern on trailers with air-ride suspension systems.

Trailer beds can move vertically, or drop, up to approximately 8 inches during the loading and unloading process. Trailer drop causes forklift operators to experience significant jolts, which can lead to chronic back and neck injuries. Restraints that stabilize the trailer to prevent both vertical and horizontal movement address the long-term wellness issues of forklift operators, including the risk of chronic spinal injuries.

In addition to trailer drop, operators of lift trucks (forklifts or stand-up walkies) often experience significant jarring known as “dock shock” as they cross between the warehouse floor and the trailer bed. The problem is created by bumps and gaps that exist on traditional dock levelers. It is a significant source of occupational vibration, which is known to cause chronic health problems. The risk can be minimized with dock levelers that create a smooth path for lift trucks traveling in and out of trailers.



Forklift/Pedestrian Accidents

Nearly 100 workers are killed each year in the United States as a result of forklift-related incidents. At the dock, the situation calls for clear communication to the right person, at the right time and at exactly the right location. Communication at the dock often has to do with a forklift operator knowing where pedestrians are and pedestrians knowing where forklifts are at all times, which is difficult when forklifts are operating inside trailers.

Many safety-minded companies look to next-generation technology to address the problem. One such technology uses lights and an alarm to communicate the status of forklifts inside the trailer. With the system, forklift drivers and pedestrians know when a forklift is working inside the trailer so they can exercise proper caution against that forklift backing out. The use of lights can also be used to enhance communication of the status of vehicle restraints to the forklift operator, adding another level of protection against potentially catastrophic trailer separation accidents.

Falls at the Dock & Elsewhere

Vacant docks and raised areas, such as work platforms, are another safety threat because they are places where people and forklifts can fall. Another reality is that forklifts can accidentally crash through closed dock doors. Loading dock barriers and gates guard against the potential for pedestrians or materials-handling

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equipment to fall off the edge of a dock. Many of the same types of systems also prevent people and materials-handling equipment from falling off elevated areas inside the facility, such as raised platforms and mezzanines.

Newer barriers and gates address the need for ease of use and adaptability. An important distinction is that some barriers and gates are only meant to provide a substantial visual and physical barrier, guarding against incidental materials-handling equipment impacts. Heavy-duty barriers and gates, on the other hand, provide a visual barrier and can stop a 10,000-pound forklift traveling up to 4 MPH. The term “heavy-duty” also eliminates the need for conventional steel guardrails. Technically advanced barriers and gates frequently provide sufficient stopping power—as well as the flexibility most operations require for addressing their needs throughout the facility.

The Threat of Dock Fires

Another major safety concern is the threat of burning dock seals. It's been shown that heat buildup that leads to burning seals can occur when hot-running semi-trailer lights are compressed against any make or model of compression-style foam dock seals. It can result in extensive damage to seals, buildings, trailers and trailer contents. The number of dock seal fire incidents has risen dramatically since 1999 when the National Highway Traffic Safety Administration began to enforce requirements of trailer marker lights for all over-the-road trailers.

Companies can address the issue with advanced dock seals. For example, heat-dissipating, layered foil technology is incorporated into some dock seal head pads and curtains. Unlike fire-retardant materials, which only act to extinguish a fire once it has started, heat-dissipating materials prevent the dangerous buildup of heat, keeping the temperature at the surface of the seals at a safe level—and preventing scorching or burning from occurring. Such seals are proven to prevent burning caused by the heat of trailer marker lights.

Industrial Door Accidents

The use of high-speed doors is driven by the ever-growing need for energy efficiency and productivity improvements, yet the importance of using doors designed around safety cannot be understated. Safety devices used on doors range from basic warning labels to reversing-edge mechanisms to photo-eye sensors to flexible bottom edges to area-detection systems. Other common devices include warning signals and vision panels. Given the options, it's important to think through which is most appropriate for the application.

Tackling the Issues

Addressing the most common safety challenges at the dock and other fast-paced environments is easier said than done based on the complexity of the issues involved, and the range of strategies and solutions to address them. Tap into the expertise of a qualified dock equipment manufacturer's representative to help ensure the safest possible loading dock and materials-handling operation.

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