

# Curbing Forklift Hazards

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BY GEOFFREY PECKHAM

is no. When it comes to mitigating risk and going about your work in the safest way possible, there are new methods for communicating risk that provide us with better ways to warn than the status quo found in most warehouses and facilities. The latest warnings technology (the new U.S. and international best practice standards) and safety semiotics form the base for these new communication methodologies.

Semiotics is the science behind how signs and symbols communicate, and it makes all the difference when it comes to creating effective safety warnings. We have played an active role in writing the U.S. safety sign standards from the American National Standards Institute (ANSI), as well as the international standards on this same topic from the International Organization for Standardization (ISO). Both sets of standards use semiotics to establish best practices for safety signs, labels, and markings.

The ANSI Z535 standards establish a “national uniform system for hazard recognition,” while the ISO standards establish global best practices for safety signs and their components. The ANSI Z535.2 *Standard for Environmental and Facility Safety Signs*, the primary standard for workplace and public area safety signs, has been updated in the last two decades to include principles derived from human factors research on how people comply with visual messages. This ANSI standard also contains warning content guidelines grounded on U.S. case law that has refined the definition for what constitutes an “adequate warning.” Most safety signs in place in facilities today communicate partial information. The newer technology, as defined in the ANSI and ISO standards, is different and better. New safety sign systems built on this platform effectively:

- define hazards and how to avoid hazards
- convey risk by using a severity level matrix aligned with today’s risk assessment methodologies
- better accommodate symbols to communicate across language barriers
- use color-coding to draw attention to the sign

The new systems give management an important tool for warning people about potential risks and hazards so they can make good decisions to avoid accidents and injuries.

When it comes to applying these principles to safely guide forklift traffic in warehouse and distribution centers, a single sign is not able to do the job that’s required. Let’s look at a specific, real-life application to illustrate the concept of how a system of signs is the answer. We had the opportunity to design a state-of-the-art warnings program for a major supply facility’s premises, including a series of signs intended to con-



**P**owered industrial trucks are essential in many industries to transport and distribute materials. Forklifts also present a major safety concern: traffic accidents. According to OSHA statistics, forklifts cause approximately 85 fatalities and 34,900 serious injuries per year and account for another 61,800 injuries that are classified as non-serious. To reduce risk and avoid these tragic workplace accidents and injuries, proper training reinforced by safety signs is key to protecting workers, visitors, and subcontractors.

Is an assortment of forklift rule signs, disorganized in placement and using years-old standards, the answer to reducing forklift accidents? The short answer



**Figure 2.**

vey safety information related to forklift traffic.

A hodgepodge of signs had been used in this facility. The photograph on page 50 shows the floor markings and path guarding that were used for pedestrians in the plant. Serious accidents had occurred in this plant due to interaction with forklifts; one person was struck by a moving forklift, and another was backed over by a forklift. Something had to be done. Providing proper warnings, path delineation, and training reinforcement was the solution.

■ A primarily symbol-based composite sign combined the major forklift safety rules directed at drivers. These signs were stra-

tegitally located, posted at all forklift door intersections within the facility (shown on page 48).

■ A series of sign components was created to alert pedestrians to take precautions to stop and look out for forklift traffic as they move through the plant. These signs were strategically located both as floor markings and as signs posted on pathway gates. Here the intended audience is not only shop floor employees, but also management staff, visitors, and subcontractors.

The new sign system utilizes ISO symbology, ANSI Z535 formatting, color coding, precise sizing for legibility/viewing distances, and the facility owner's chosen safety messaging. All of this was done in a way that is both innovative and eye-catching. This last point is important because if signs are not noticed, they won't convey their potentially life-saving messages. This is where semiotics and expertise in applying current best practice standards combine to protect people. There is no greater objective. **OHS**

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