GO GLOBAL FOR STRONGER SAFETY CLAIMS

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Manufacturers of workplace products often hide behind weak U.S. safety standards to avoid liability for injuries. More stringent international safety standards can show what the manufacturer should have done to prevent your client's injury.

With the 2008 downturn in the stock market, Suzette's 401(k) nest egg shrank to nothing, forcing her out of retirement and back to work. She got a job as a laborer at a large commercial bakery, working on an automated bread-making conveyor.

During a shutdown of the equipment for cleaning, Suzette kneeled down and reached under the conveyor to wipe off excess dough that had stuck to a pulley. Her supervisor, stationed at a distant control panel, couldn't see Suzette and restarted the line. Suzette's arm was pulled into the nip point created by the conveyor belt going over the pulley, stripping all the flesh from her forearm. Her dreams about how she would spend her golden years were shattered.

Suzette's employer had violated the Occupational Safety and Health Administration's (OSHA) lockout/tagout requirements, which mandate that every employee who is working on a piece of de-energized equipment (to which the power has been disconnected) be provided an individual lock that is attached to the control switch. This ensures that the equipment cannot be turned on until the worker who turned it off removes his or her own lock once he or she is out of harm's way.

Suzette's employer violated this and other OSHA regulations, as well as the warnings and instructions that the conveyer manufacturer provided in its operation manual. Despite the employer's clear negligence, it was exempt from suit because of workers' compensation immunity.

To provide Suzette with adequate financial compensation and security—which she wouldn't receive through the nominal workers' compensation payments—a products liability claim was investigated against the Japanese manufacturer of the automated bread line. On first review, the case might seem daunting: The employer's conduct was a major cause of the accident, and the industry safety standards for bakery equipment published by the American National Standards Institute (ANSI) explicitly stated that the manufacturer, in its design, should rely on the employer following OSHA lockout/tagout procedures.[1]

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But Suzette's products liability claim against the Japanese manufacturer was actually strong. Japan, as well as the member countries of the European Union (EU) and many American manufacturers selling in the international market, has adopted stringent product safety standards. These international standards not only formally incorporate many basic safety principles that are the traditional foundations of products liability cases, but they also mandate specific actions and design features.

U.S. safety standards rarely support a design defect case, and manufacturers in many jurisdictions use them to shield themselves from liability. Reflecting major manufacturers' dominance of the technical committees that draft them, ANSI standards typically impose on the manufacturer only minimal design requirements, and they focus heavily on the employer's responsibility to provide training and the operator's duty to read and follow warnings. Most standards promulgated by OSHA are now 40 years old and, by the terms of OSHA's enabling legislation, govern the conduct of the employer only.

Because strict liability cases may exclude all evidence relating to negligence concepts, plaintiff counsel often face uphill battles with the court and the jurors, who want the plaintiff to prove that the defendant manufacturer did something wrong. Jurors see the plaintiff expert's opinion as Monday morning quarterbacking, in the absence of stringent U.S. standards. International safety standards are an underused and powerful resource to define the standard of care that the manufacturer should have followed—but violated—in designing its product.

International product safety standards require a rigorous predesign hazard analysis, recognize the importance of anticipating human error and studying accident history, and mandate that hazards be reduced through design and not by warnings. Manufacturers' compliance is often pro forma, providing fertile ground for deposition questioning and presentation at trial.

Three major sets of standards can be particularly helpful: EN standards prepared by the European Committee for Standardization (CEN), which governs all products sold in the EU; ISO standards prepared by the International Organization for Standardization, which is a consortium of 162 countries' standards organizations (including ANSI from the United States); and JIS standards, written by the Japanese Industrial Standards Committee and published by the Japanese Standards Association for all products manufactured in Japan. To facilitate the global sale of products, these three organizations are working to harmonize their standards over the next several years by adopting similar requirements, with frequent cross-referencing among the organizations.

Although compliance with these international safety standards is not yet formally required by regulatory agencies in the United States, many U.S. manufacturers—especially those that sell their products overseas—have adopted the standards as their own design requirements. Through their American trade associations, such as the Association of Equipment Manufacturers (AEM), many U.S. manufacturers serve on the ISO technical committees that draft safety standards. Minutes of these committee meetings, often available online, record frank discussions revealing the manufacturers' recognition of the significant potential dangers their products pose.

For example, some U.S. heavy equipment manufacturers such as Caterpillar, CNH-New Holland, and John Deere are members of AEM and send delegates to the ISO technical committee for earth-moving equipment (TC 127). They would be hard pressed to distance themselves from these ISO safety requirements.

Three levels of standards apply to product design: universal safety principles that apply to all products, standards that are focused on a particular industry, and product-specific standards. An Internet search can quickly identify the EN, ISO, and JIS standards that may apply to a particular product.[2] The standards are updated periodically, with prior editions withdrawn. The edition in effect at the time of the product's design and sale defines the standard of care.

At the beginning of every standard is a list of other standards that are incorporated by reference. Plaintiff lawyers must review all the incorporated standards, because they may set out the most critical requirements.

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SAFE DESIGN

One of the fundamental premises of design is the "hierarchy of safety," which prioritizes the ways to mitigate a potential safety hazard:

- eliminate the hazard by design
- if the hazard cannot be completely eliminated, guard the hazard
- if a hazard still remains, provide warnings.

EN safety standards not only adopt this hierarchy but also affirmatively assert that "any measures which can be incorporated at the design stage are preferable to any which are implemented by the user"[3] and that "information for use [such as warnings] shall not compensate for design deficiencies."[4]

In response to the traditional defense that the manufacturer did not guard against a hazard because it relied on the employer's training and the worker's knowledge, the JIS standards state: "Training, experience, and ability can affect the risk, but none of these factors shall be used as a substitute for hazard elimination, risk reduction by design, or safeguarding where these safety measures can be implemented."[5]

The international standards often mandate a specific design to address a hazard. In one client's case—involving the inadvertent activation of the controls of a Japanese hydraulic excavator—the applicable Japanese standard required the controls to be designed to prevent this type of accident. In searching for the Japanese standards, my firm discovered a pictorial alert issued by the Japanese counterpart to OSHA, depicting the client's exact accident, eight years before the excavator was manufactured.

RISK ASSESSMENT

According to the ISO, JIS, and EN standards, as well as basic safety engineering, it is axiomatic that before a product's design stage can be completed, it is essential to identify every potential hazard, because "it is assumed that, when present on machinery, a hazard will sooner or later lead to harm if no protective measure(s) is (are) taken."[6]

The standards say that the manufacturer must conduct an exhaustive analysis of how the product is to be transported, installed, used, cleaned, maintained, repaired, and disposed of to determine all potential accident scenarios. In each mode, "the designer shall take into account the . . . unintended behaviour of the operator or reasonably foreseeable misuse of the machine."[7] A manufacturer that expects its product to always be used safely and responsibly violates these standards.

A JIS standard on risk assessment "establishes general principles for the procedure known as risk assessment, by which the knowledge and experience of the design, use, incidents, accidents, and harm related to machinery is brought together in order to assess the risks during all phases of the life of the machinery."[8] That standard requires the manufacturer to document in writing all assumptions, all hazards identified, all information relied on (including "accident histories [and] experience gained from risk reduction to similar machinery"), all safety measures taken, and all residual risks.[9]

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Manufacturers often fail to document their risk assessment, thereby violating not only these international safety standards but also the ISO standards for "good quality management practices." Companies love to claim that they are "ISO 9001 certified," indicating that they follow good business practices. Failure to document the decision-making process, record the specific decision made, and communicate the final decision to all affected parties violates the principles set out in the ISO 9000 series and increases the likelihood that bad decisions will be made and that safeguards will not be followed.

In Suzette's case, the manufacturer documented its risk assessment but completely disregarded the hazards that could arise during cleaning. This violated not only the principles of risk assessment that apply to all equipment but also the JIS standard that focused on the baking industry. That standard recognized, "There is extra work by the operator on food processing machinery which requires cleaning and removal of stuck food material. There is, therefore, more risk of being rolled in, cut, or injured."[10]

ACCIDENT HISTORY

Evidence of prior similar accidents is powerful at trial; it shifts the focus from what your client did wrong to how the manufacturer could have let this incident happen. But trial courts often exclude this evidence.

The court may exclude prior accidents unless they involve almost the exact same product and occurred in a manner remarkably similar to the plaintiff's accident. Even if the court rules that the prior accidents are relevant, the plaintiff faces the evidentiary challenge of proving the underlying facts of the accidents over defense counsel's objections as to hearsay and lack of foundation. Once the plaintiff assembles the evidence necessary to detail the prior accidents, defense counsel may object to wasting the court's time with multiple mini-trials within the trial.

The international safety standards obligate a manufacturer to seek information about, and then analyze carefully, prior accidents involving not only the product at issue but also any similar products, even those made by its competitors. The JIS standards say:

The information for risk assessment and any qualitative and quantitative analysis shall include . . . any accident and incident history. . . .

Comparisons between similar hazardous situations associated with different types of machinery are often possible, provided that sufficient information about hazards and accident circumstances in those situations is available. The absence of an accident history, a small number of accidents or low severity of accidents shall not be taken as an automatic presumption of risk.[11]

To comply with these standards, manufacturers must review all accident data, but they rarely do.

The Restatement (Second) of Torts §324(A) imposes liability for the negligent performance of an undertaking necessary for someone's safety and provides a different avenue for admitting evidence of prior accidents. A competent design expert can be presented at trial to outline what the relevant standard of care requires a manufacturer to do to search for accident data, analyze it, and learn the appropriate lessons.

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A manufacturer needs to reach out and survey its customers, who rarely report accidents and never report "near misses." It should search multiple databases for accidents and then research in detail those that are similar. Most important, the manufacturer's primary focus should be determining what it can learn from these accidents to improve its product's design, rather than how can it blame the accident on someone else's conduct.

In Suzette's case, the manufacturer said it had been told about only one slightly similar accident in the conveyor's decades of use. But the manufacturer had not taken a single affirmative step to find out whether there were other accidents involving conveyor belts on either its or its competitors' automated bread lines.

A portion of the Data and Statistics section of OSHA's Web site is devoted to summaries of fatality and catastrophe investigations, which can be searched using multiple criteria, including the type of equipment. Although OSHA vastly underreports catastrophic accidents, this data can be a tremendous resource.[12]

For Suzette's case, a five-minute search of the OSHA data revealed 74 catastrophic accidents involving conveyor belts in the commercial baking industry for the 10 years before the defendant sold its automated bread line. These included 7 fatal accidents and 22 accidents related to the unexpected restart of a conveyor during maintenance or cleaning. The OSHA Web site also included a report saying that the most frequently violated safety standard in the baking industry was OSHA's lockout/tagout regulation.

At Suzette's trial, the judge ruled that the descriptions of the conveyor accidents from the OSHA database were not hearsay. The judge recognized that they were being offered not to prove the facts of each accident but rather to show what a responsible manufacturer could have discovered if it had acted reasonably.

The expert was permitted to describe the lessons a responsible manufacturer would have learned from the accident reports. To reduce the risk of reversal on appeal, a good trial technique is to ask the judge to give a cautionary instruction as to the purpose and scope for which the accident history is being offered.

Most U.S. safety standards for workplace products lag behind their more stringent international counterparts. But weaker U.S. standards shouldn't immunize U.S. manufacturers from being held responsible for the unsafe design of their products.

Whenever undertaking the responsibility of representing someone injured at work by an unsafe product, be sure to tap into the tremendous resources that international product safety standards offer.

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Notes:

1. Am. Natl. Stands. Inst., American National Standard for Bakery Equipment—Safety Requirements, ANSI Z50.1-2000 §§1.5, 4.
2. EN Standards are located at www.cen.eu; ISO standards are available at www.iso.org; and JIS standards are available at www.jsa.or. jp/default_english.asp. If the JIS standard is not offered in English, it may be listed as being identical to either an ISO standard or an EN standard. One potential source for withdrawn standards, in addition to the local engineering library, is the BSI Group's Web site at www.bsigroup.com. To ask about withdrawn titles, contact the BSI Knowledge Centre at knowledgecentre@bsigroup.com.
3. European Comm. Standardization, Safety of Machinery: Basic Concepts, General Principles for Design—Part 2, EN 292-2:1991 §5.
4. Id. at §5.1.2.
5. Japanese Stands. Assn., Safety of Machinery: Principles of Risk Assessment, JIS B 9702:2000 §7.3.4.
6. Intl. Org. Standardization, Safety of Machinery: Basic Concepts, General Principles for Design—Part 1: Basic Terminology, Methodology, ISO 12100-1:2003 §5.1.1 (This standard reflects JIS B 9700-1:2004.).
7. Id. at §5.5.3(c).
8. Japanese Stands. Assn., supra n. 5.
9. Id. at §9.
10. Japanese Stands. Assn., General Design Rules for Safety and Hygiene of Food Processing Machinery—Part 1: General Design Rules for Safety, JIS B 9650-1:2011 §4.1.
11. Japanese Stands. Assn., supra n. 5, at §4.2.
12. The search is available at www.osha.gov/pls/imis/accidentsearch.html. J.P. Purswell, an expert witness who frequently testifies for the defense, has written: "The Occupational Safety and Health Administration compiles summaries of accident investigations and makes these records available through its website. . . . Thus, if one wishes to investigate the types of accident scenarios that are known to occur for a particular type of equipment, one can retrieve the records for that product type from the OSHA accident database. . . . As this analysis shows, valuable information concerning specific types of equipment and common accident scenarios is available from OSHA." (Jerry P. Purswell, Crawler Crane Accident Patterns, in Procs. of the 21st Annual Intl. Socy. Occupational Ergonomics & Safety (ISOES) Conf. 108, 111 (Robert J. Marley et al. eds., ISOES 2009).)
13. See more at: https://www.justice.org/magazine-article/go-global-stronger-safety-claims#sthash.Qj30oOu2.dpuf

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