

OSHA to the Rescue

Roofing industry benefits from agency's efforts

By Randall D. Mundy

EARLY IN 1970, when I was a senior in high school, my father, a foreman for a local commercial roofing firm, informed me that my good friend, Rod, who had recently joined my father's crew, had had a serious accident at work. My father thought he probably died at the hospital.

Fortunately, my father was wrong. Rod, survived and eventually recovered to lead a productive life. He was fortunate to survive his injuries, but the pain and suffering that he and his family endured might easily have been avoided.

The accident occurred on Rod's first day on the job. He was understandably excited and nervous, and was eager to do a good job. At the time, the company had no training program—a roofer was simply expected to learn on the job. Rod was likely warned by the foreman to be careful.

That day, the owner of the company happened to visit the jobsite. Rod was eager to show that he was a good worker and was likely more worried about the proximity of the boss than he was about the proximity of a nearby—and open—skylight hole.

While moving a heavy wheelbarrow full of gravel, Rod unknowingly backed into the hole. When his coworkers noticed the unattended wheelbarrow next to the hole, its handles positioned over the hole, they feared the worst. They found his motionless body on the concrete subfloor below. He had fallen more than 40 feet and had been knocked unconscious by the impact. His jaw was broken, his right arm and knee were shattered, both ears were injured and most of

his teeth were knocked out. According to those who witnessed this scene, Rod's survival was miraculous.

Acting for the Public Good

Plastic and reconstructive surgery and a year of physical rehabilitation put Rod back into the social and working worlds,

follow. Before OSHA, workplace injuries and fatalities were commonplace. As Goetsch explains in *Occupational Safety and Health*, "in 1907 more than 3,200 people were killed in mining accidents" alone (1). Nineteenth century American government and public opinion largely ignored worker safety, siding with management.

Early in the 20th century, however, opinions began to shift. Writers such as Upton Sinclair with his 1906 novel, *The Jungle*, revealed many dangers—primarily in the meatpacking industry of Chicago—that existed in industrial workplaces across America and decried the apparent indifference of management.

Progressive political leaders such as Theodore Roosevelt also recognized the need for legislation and governmental assistance to protect American workers. Thus began the movement that culminated in the OSH Act. President Roosevelt read Sinclair's book and felt obliged to launch an investigation into the conditions described (Brands 548-49). While the agricultural bill

that resulted primarily provided for federal inspection of meat, working conditions also improved. Early in his presidency, Roosevelt recognized that government would have to act for the public good:

Wage workers must be protected from overweening corporations by government regulation. Women and children of the working class must be further safeguarded by



but society and the American workplace had failed him.

Later that same year, President Nixon signed into law the OSH Act to "assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources" [OSHA(a) 1]. Although the establishment of OSHA the following year did not alleviate any of Rod's pain and suffering, it would reduce the likelihood of similar accidents in the years to

special legislation forbidding excessive hours or unhealthy conditions (Brands 426).

Roosevelt continued to advocate safer labor conditions in America even after he left office in 1909. In his bid for reelection in 1912 as a third-party candidate, Roosevelt “urged the passage of the workman’s occupation act, laws regulating labor by women and children, and the establishment of practical job training for students not bound for higher education” (Brands 676).

Following the infamous 1911 Triangle Shirtwaist factory fire in New York City, headlines in *The New York Times* read, “141 Men & Girls Die in Waist Factory Fire”; “Trapped High in Washington Place Building”; “Street Strewn with Bodies”; “Piles of Dead Inside” (Boyer, et al 699). The Triangle fire showed that industrial America continued to be a dangerous place. In this particular case, there were too few escape routes and doors were locked to keep workers from wandering away from their workstations.

Attention to workplace safety during most of the 20th century was primarily driven by labor unions. For most laborers, hours were long and hazardous. Although as early as the 1800s people had called for an eight-hour week, the average worker in 1900 labored for nine-and-a-half hours with some industries requiring 12- to 13-hour days. Statistics show that large numbers of children were employed as well. In 1900, more than 18 percent of America’s children worked (Boyer, et al 705). Pressure by unions, in the form of labor strikes, and the support of politicians such as Roosevelt eventually brought about change.

The Tide of Change

By 1907, despite some claims that abolishing child labor would produce “a nation of sissies,” some 30 states had done just that. A 1903 Oregon law limited women in industry to a 10-hour workday. Other reformers concentrated on industrial safety, welfare programs and disability benefits for workers injured on the job. By 1914, 25 states had passed laws making employers liable for job-related injuries or death (Boyer, et al 712).

The federal government later produced a series of important laws following the state’s lead. In 1917, President Woodrow Wilson was asked to arbitrate labor agreements between railroads and the labor unions. Wilson suggested introducing an eight-hour workday and the

union agreed, but management resisted. Taking matters into his own hands, Wilson asked Congress to write federal law to introduce the eight-hour workday.

President Wilson would later sign that legislation—known as the the Adamson Act—into law (Nordholt 192-193). He also signed into law the Keating-Owen Act, which barred any products made through child labor from interstate commerce, and the Workers’ Compensation Act, which provided accident and injury protection for federal employees (Boyer, et al 730).

Still, the federal government was slow to legislate wholesale change. Throughout the 1930s and 1940s, the workforce depended on unions to protect their best interests with respect to safety in the workplace. Between 1933 and 1946, labor union membership grew from three million to nearly 15 million (Boyer, et al 841). Union membership increased as the population grew, reaching 20.1 percent of wage and salary earners in 1983. However, membership has since decreased steadily. In 2002, only 13.2 percent of wage and salary workers were members of unions (BLS 1). In the author’s opinion, OSHA may be a factor in that decline. With the advent of OSHA, labor unions were no longer the primary entity concerned about the welfare of America’s workforce.

OSHA Arrives

In 1970, when developing the OSH Act, legislators noted that 14,000 workers were dying because of workplace hazards, 2.5 million workers were being disabled and 300,000 new cases of occupational diseases were being reported yearly (Goetsch 53).

A comprehensive, uniform law was needed to help reduce the incidence of work-related injuries, illnesses and deaths. The OSH Act of 1970 addressed this need. It is contained in Title 29 of the Code of Federal Regulations, Parts 1900 through 1910. The act also establishes OSHA, which is part of the U.S. Dept. of Labor and is responsible for administering the OSH Act (Goetsch 53).

According to Goetsch, OSHA’s foremost goals are to encourage employers and employees to reduce hazards in the workplace; implement new safety and health programs; encourage research into ways to improve workplace safety; establish training programs; establish mandatory workplace standards; and monitor job-related illnesses and injuries by reporting and recordkeeping (54).

Statistics show that OSHA has been worthwhile. According to “OSHA Facts,” on-the-job deaths have been reduced 60 percent since the agency’s formation in 1971, while the number of workers has more than doubled [OSHA(b)]. In addition, workplace injuries and illnesses have declined by 40 percent over the past 30 years [OSHA(b) 1].

Although critics of the Bush Administration have argued that his proposals to slash spending would stall improvements in workplace safety and endanger lives in the workplace (AFL-CIO), OSHA’s efforts, as the cited statistics suggest, have not suffered greatly in the author’s opinion.

For example, in 2004, OSHA had a staff of 2,220, including 1,123 inspectors. OSHA tallied 39,798 inspections in 2003, almost 50 percent of which were in the construction industry. More than 56 percent of the inspections were “high hazard targeted.” More than 83,000 violations were found—less than a collective four percent of the total were willful, repeat or failure to act violations—and more than \$82 million was levied in fines. In 2003, OSHA conducted 28,998 consultations and 280,785 students were trained through OSHA outreach training programs [OSHA(a); (b)].

Impact Most Noticeable in Construction & Roofing Industries

Perhaps OSHA’s influence is most-needed in the construction industry. Typically, the construction industry accounts for the largest percentage (20.3 percent in 2003) of the total occupational fatality statistics. For example, in 2003, the construction industry nationwide suffered 1,126 fatalities in the workplace, of which 32 percent were caused by falls (with falls being second only to highway accidents in labor-related deaths) and 10 percent were caused by contact with objects and equipment (BLS Table 2).

In 2001, 116 fatalities occurred in the roofing and related industries, with 67.2 percent of the deaths related to falls and 4.3 percent caused by contact with objects or equipment. A roofer is more likely to die as a result of a fall than any other roofing-related workplace accident and is obviously more susceptible to a fall-related death than the rest of the construction industry.

The OSHA standards that focus on the most hazardous elements of the roofing industry concern fall protection. In Subpart M-Fall Protection, CFR 1926.500, OSHA identifies the scope, application and definitions applicable to fall protec-

tion. In 1926.501, OSHA declares the duty of the employer to provide fall protection, and in 1926.502 OSHA describes fall protection systems and practices.

If instituted, the detailed precautions, would make worksites safer. The challenge continues to be how to persuade contractors to comply with OSHA's safety standards. In some cases, compliance may require sizable expenditures in equipment and workhours. In other cases, more employees may be needed to meet monitoring needs.

Because of competition and the desire to keep business costs low, some contractors have tried to avoid complying with OSHA standards. The agency is trying to improve compliance through inspections, by instituting strict penalties for noncompliance, and by consulting with and educating small and large businesses concerning their legal responsibilities. However, even with a \$457.5 million budget, OSHA cannot be everywhere at once. The most visible companies will naturally get the most attention while some at-risk-businesses will go unnoticed, meaning workers will be needlessly put at risk.

Some critics argue that OSHA is too bureaucratic and insensitive to the needs of employers, while others believe that OSHA can be timid and reluctant to follow up on citations. In my experience, I have not seen a particularly heavy-handed or overzealous approach by OSHA inspectors. The officers I have met have not gone out of their way to find violations. They have generally been eager to help companies fix problems and meet obligations in the most cost-effective and painless manner possible.

The tide continues to turn in the direction of compliance, with more companies recognizing the cost effectiveness and ethical value of protecting the safety and health of their employees. Providing a safe and healthy workplace is one of the best ways to keep workers' compensation and insurance costs low. Workplace accidents alone cost \$48 billion in a typical year in America, while medical expenses for accidents are \$24 billion and wages lost to American families are \$38 billion in a typical year (Goetsch 19, 20). National Safety Council has estimated that as a result of accidents at least 35 million workhours are lost every year (22). Clearly, companies are wise to comply with OSHA standards to save money beyond the cost of paying stiff penalties for OSHA citations.

More and more companies have learned—thanks to the advent of OSHA and progressive business thinking—that competitiveness requires them to strive for safety in the workplace.

Safety and health contribute to competitiveness in the following ways: a) by helping companies attract and keep the best people; b) by allowing employees to focus on peak performance without being distracted by concerns for their safety; c) by freeing money that can be reinvested in technology updates; and d) by protecting the corporate image (Goetsch 22).

Safety: Part of Doing Business

To achieve a greater level of competition, many contractors are hiring safety and health managers and developing safety plans with rules that in some cases are more stringent than federal regulations. For example, while working with high-profile nationwide companies such as Turner Construction, The Austin Co. and Honeywell, I have found that safety monitoring alone under prescribed circumstances, as approved by OSHA standards, is not an option. Personal fall protection is required for all work within six feet of unprotected roof edges.

I am currently a safety manager for the company that my friend Rod worked for in 1970. Positions such as safety manager or safety director did not exist at this company in 1970. In early 2000, however, a progressive new owner decided to bring the company up to speed on safety. He believed that a quality-minded roofing company could be made better by making safety an equal partner with production.

The company now complies with OSHA's guidance and standards for the construction industry on fall protection. All new employees receive fall protection training and other general safety procedures specific to the roofing industry. In addition, weekly safety toolbox talks, with timely retraining concerning fall protection, help to keep safety a primary focus. The company uses safety monitors, guardrails, warning lines, hole covers and personal fall protection systems as required to protect employees.

Today, a new worker at this firm would not face the same dangers my friend Rod faced in 1970. The OSH Act and OSHA have created a more positive atmosphere about safety, which has prompted changes in attitude among both management and employees. As a result, safety has become

a serious part of doing business for many construction and roofing firms.

OSHA's influence has changed the face of the construction industry, especially in the major communities where OSHA inspectors are high profile and heavy fines are a real concern. Even in remote areas, where employers are often out of the sight of OSHA inspectors, construction companies are addressing safety. If it is true that what you do when no one can see you proves your character, the general movement by the construction industry to comply—and in some cases exceed—OSHA safety standards suggests that the industry's character is changing for the better. Although compliance is not universal, the trend of safety and health improvement in America's workplaces will continue. OSHA has made an impact—it has saved lives and changed the way American industries think and do business. ■

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Writing Worth Reading

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loss control direction. Yet, programs are based on the information in these logs. The North Star is not particularly bright, but it is more reliable for finding direction than any of the brighter planets. The OSHA logs and the planets are wanderers and not useful for direction finding.

One prejudice that does not have to be rearranged is the preference for Haddon's energy transfer theory of accident causation that is described in the first chapter. One of the Haddon matrixes is shown to give a practical working view of the theory. The references in the book to Haddon's work are sufficient to find his other papers by including the references cited by Haddon of his own earlier work. The trail of references from paper to paper has all the charm of Robert Frost's "The Road Not Taken." The references are gentle nudges to read beyond the text. It seems that the writers with the most interesting things to say are those most willing to share the sources of the information. A great deal of the safety literature is the

22nd rehash of quasi-misinformation that travels sourceless and uninspired. It astounds me that intelligent people repeat, "These regulations were written in blood" with a straight face.

Some real help is given on the functionality of causation. Causation is a difficult philosophical and practical problem for the loss control specialist. For starters, the loss control specialist must deal with many disciplines all with different definitions and standards for causation. Workplace managers want results. Employers want our efforts to result in less cost to their organizations. General acceptance of the idea of multiple causes of injury is no help. It is easy to be overwhelmed by the number of precursor events to an injury. The review of the family tree of an incident can generate hundreds of contributing causes before Five Whys are asked. Robertson cuts the Gordian Knot of infinite causes by stating, "to eliminate an injury, one need only find a controllable necessary condition for the injury, and control that condition (pg. 86)." Not everything has to be controlled, just something that is "a necessary condition." Chapter 4 alone is worth the price of the book.

There are chapters on Human Factors and Attempts to Change Them; Laws and Formal Rules Directed at Individual Be-

havior; Controlling Agents, Vehicles and Environments; Research on Treatment and Rehabilitation; Injury Epidemiology and Economics; and Injury and Policy Analysis. Each delivers useful insights.

The issue is: What factors can be changed to reduce harm and how much difference can be achieved by deliberate attempts to change the factors? *Injury Epidemiology* is an especially useful tool for use in the search. The cleanest facts and the best judgment are likely to lead to the most improvement in the lot of working people.

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