

Beyond lip service: The differences that add up to effective safety

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It seems that every company executive, plant manager and supervisor is quick to espouse safety first, but are they? Are you? It's time to identify the differences you can make.

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Asked their priorities, virtually every company president, plant manager and supervisor in Western civilization will quickly proclaim, "Safety first!" You may have billboards at the main gate, bumper stickers on the cars, and posters near the time clock, but is your plant really serious about safety? Is it fostering the most cost-effective culture? Are you doing your part?

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Responsibility for safety might formally be assigned to human resources (HR) or a group of safety experts, but effective implementation involves everybody and depends heavily on engineering and maintenance. "Maintenance is key," says Alex Mims, regional manager, safety and fleet compliance, CMC Steel, Sequin, Texas. "Nothing gets done in a facility that's not installed and maintained properly. When there's a safety problem, they have to get to it, do it and communicate the status. If maintenance doesn't act quickly and openly, operations eventually quits reporting problems."

Maintenance personnel also are among the most likely to be killed or seriously hurt. Unlike most production workers, they often are alone, doing specialized work in remote areas, Mims says. "They have to be concerned about safety if they want to go home at night."

Safe returns

If safety was free and easy, everyone would be safe. But building and maintaining a culture in which safety truly comes first takes time, effort and money, and while few North Americans would say so, not everyone is convinced it's worth it.

"We invented the safety gate, and we see companies that take the attitude, 'Do I have to install this, or is a chain OK?' The bean-counter mentality," says David LaCook, CEO, FabEnCo (www.fabenco.com). "I ask them, 'Is safety in your core values?' They say it is, and I say that means you have to do it."

Some people who push back don't understand the situation. "A small company might go a long time without a loss and not realize the risk," says Lanny Floyd, principal consultant, electrical safety and technology, DuPont, Wilmington, Del. "The cost of an accident can ruin a small company, and so can the loss of knowledge and expertise."

The cost of the injury itself might be dwarfed by lost production. "A fall might kill someone, but the machines still run," says Joe Weigel, product manager, Square D/Schneider Electric Co. (www.squared-services.com). "An arc flash may or may not kill, but equipment is damaged and shuts down, and product may be damaged or lost."

Weigel has seen cases where an arc flash with injury cost \$8 million to \$10 million. "One case cost the insurance company \$29 million," he says. "The workers' comp rate went through the roof: from \$250,000 to \$5 million for five years."

In the United States, the National Safety Council estimates for every \$1 spent on safety there is a \$3 return. "Productivity improves. Companies find that they can make more parts per day," says Dan Hornbeck, manager, safety business development, Rockwell Automation (www.ra.rockwell.com).

"Alcoa saw profitability increase several percent," says John Peabody, vice president, safety integration, Omron STI (www.sti.com). "Employees could focus on the task instead of on safety. Quality goes up, too."

Accidents also affect insurance rates. As a result of improved safety, Schneider Electric's North American Operating Division saw its medical incident rate drop 40% in 2006 at its 30 North American manufacturing facilities. This translated to a savings of approximately \$2 million, split between workers' compensation and indirect costs.

"The bean counter looks at the general ledger and sees 'safety and security expense' as reducing profits, but you're saving money," LaCook says. "We've always been very proud of our workman's comp experience modifier – in the 0.7 to 0.8 range, very good for a small company in metals manufacturing. When you see that discount, compared to others, you have a competitive advantage."

That edge can extend to costs most people don't see as safety-related, such as turnover. "Employees leave companies they see as unsafe places to work," says Travis Rhoden, editor, workforce safety, J.J. Keller (www.jjkeller.com). He suggests you take the same approach to safety that you use to keep a machine running. "Consider the cost of a down employee, and avoid that cost."

It's impossible to guarantee investing in safety will prevent all incidents, says Greg Anderson, CEO, Results in Learning (www.resultsinlearning.com), "But I can guarantee that not investing in safety will result in incidents occurring, either on or off the job, because people who work in a culture of safety have that mindset wherever they are."

Avoiding the cost of a single incident that would have injured or killed can pay for a program. "Financially responsible people are willing to spend the money because they understand the consequences," Weigel says. "Even if they think it costs too much or they can't afford it, they have to do it. If someone gets hurt, they have to do it anyway, and they pay both ways."

It's a culture thing

The specific regulations, staffing, equipment and training you need to maintain a safe working environment depend on the nature of your operations. The critical element is fostering a mindset that truly gives safety more than lip service – where it naturally comes first in every plan and activity.

"It's kind of a culture thing," says Rhoden. "Not safety culture specifically – the same culture that leads to problems in production or quality carries over to safety." For instance, OSHA's first update to the Electrical Installation Standard in 25 years took effect in mid-August. "They published it in February, and now, in mid-July, we're getting deluged with questions," Rhoden says. "Some companies saw it, planned for it and geared up for it. Others are cobbling it together at the last minute. Still others are looking for a loophole: 'Why do I have to comply?'"

DuPont lubricants can help lower cost

DuPont lubes can help reduce equipment failure and maintenance when used in bearings, vacuum pumps, seals, valves, gearboxes and o-rings. From OEM to aftermarket, automotive to chemical processing, and in many industries and MRO environments, DuPont lubes are becoming the lubricants of choice. See why.

Like maintenance, some see it as proactive versus reactive. A reactive company might participate in OSHA's Voluntary Protection Programs (VPP), where OSHA comes in and tells them where the discrepancies are, and they get them fixed. "Or they react to an incident – a finger gets crushed and they fix that machine only," says Peabody.

When something becomes a new OSHA regulation, the safest facilities will probably already be doing it.

"Alcoa is an example of a proactive company," Peabody says. "When they buy a plant, they have us go over it. When they specify new equipment, they have us check the engineering."

Like any initiative, safety must be driven from the top. As a company's number-one priority, it must be discussed first at every meeting, tracked with key performance indicators (KPIs), and part of every manager's performance review.

But as a complex combination of knowledge, observation, attitude and action, safety depends on day-to-day interaction of everyone in the plant. "Goals, resources and systems depend on leadership and management. Workers who are most at risk have to feel that commitment from the top – that they can raise an issue with their supervisor," says Floyd. "But leadership doesn't have all the answers. They need help to know what's going on with technology and training," and on the plant floor.

Suggestion systems help management see ways to improve safety, "and ways to be equally safe but at lower cost are equally important," Floyd says, "But there also must be ways to deal with immediate problems – urgent items." Maintenance and engineering are often the critical links between recognizing a hazardous situation and implementing a solution. Their talents also are critical on the safety committee, and as part of any incident investigation. "Maintenance should be involved in the safety committee partly because, by nature, they ask, 'What went wrong?'" says Mims. "They're good problem solvers and talented at identifying system problems."

"Maintenance is key to everything," Rhoden adds. "If Maintenance is not your friend, you're not going to get anything done."

Behavior makes the difference

Touring a facility can give some idea of a company's safety competence, and employee behavior reveals the rest of the story. "Every company has a safety culture, good or bad," says Anderson. "Those companies that truly excel have a culture of safety where each person believes in safety, not just complies, and takes personal responsibility for their own safety as well as the safety of those around them.

For example, consider the case of two men are working on a platform more than 6 ft. off the ground, and one of the men unhooks his fall protection and continues working. "In a culture of safety, his partner stops him immediately and has a safety conversation with him," says Anderson. "In a bad safety culture, his partner ignores it because the person does it all the time and nothing has ever happened before."

Or a case where a welder observes a supervisor walking through a work area wearing only head protection where eye and head protection must be worn at all times. If the supervisor has fostered a culture of safety, where everyone is accountable for speaking up, the welder quickly walks over to him and has a safety conversation. The supervisor thanks him for caring about his safety.

Elsewhere, the welder ignores him because he's a supervisor and, besides, last time he said something the supervisor told him to mind his own business and get back to work.

In the safe plant's monthly senior management meeting, the first thing the president of the company tells the team is what he or she intends to do the following month to continually reinforce their culture of safety, then asks each team member what they will do. The less-safe plant? "What, are you kidding?" Anderson says. "Safety is never even discussed at this level of the company; they only focus on last month's profit."

Hornbeck tells of the Tier 1 supplier of die-cast alternator cases he saw exposing operators to molten metal. "They say it's been that way for years and they aren't going to do anything about it," he says.

"They're surviving on luck."

He visited a stamping plant and saw a number of safety controls on just one of a set of otherwise identical machines. Why only the one? They said, "Somebody got hurt on that one and OSHA made us upgrade it."

One of the saddest situations occurs when safety installations and upgrades are rendered ineffective by uninformed design or misuse. "More than 90% of the machines on factory floors we've assessed are not guarded or they are guarded incorrectly," says Peabody. "Companies spend money, get a false sense of security, and operators bypass them."

The two main underlying causes are misapplication of technology and incorrect interfacing. An example of misapplication would be a fixed guard over a point that has to be accessed daily for cleaning or maintenance. "It has to be gotten around, so soon it's hanging by one loose screw or missing altogether," says Peabody. Better would be a moveable guard with a switch.

Another example occurs in presence-sensing. The machine should stop when the operator is there, but the sensor is too close to the point of operation and the machine can't stop in time, or the operator can reach over the sensor.

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An example of incorrect interfacing is a circuitry failure that stops a critical machine or shuts it down in a high-risk way. The system should be redundant and monitored so it fails safely.

"Problems usually occur when work is done by a local integrator who isn't a safety integrator, for example, slapping a light curtain into a stop circuit without considering distances or interfacing," Peabody says.

Operators who bypass safety systems are trying to tell you something. Hornbeck says, "If a supervisor or operator is thinking, 'How can I bypass the system because I need productivity?' that means it's a poorly designed system."

A similar situation occurs when equipment is designed and installed without considering ergonomics.

"People know they have issues with repetitive injuries," says Mark Pasko, product engineering manager, ergonomic lifting and material handling, Ingersoll Rand (www.irtools.com/lifting), "But often they don't call until the major equipment is done and they find they have a problem." If ergonomics expertise is drawn on at the design stage, it can be integrated with the process and equipment, reducing the potential for injury and sometimes reducing labor costs and product damage.

For example, a facility receiving automobile hoods found out too late that they were packed too compactly for automatic unloading. "They had to get the first one out manually," Pasko says, which led to operator injuries, product damage and unplanned unloading time.

Better plants are more proactive, bringing safety personnel to see vendors' equipment before the specifications are finalized. "They used to be walking in after the engineering was done and beating up the engineers," Pasko says. "Now safety is coming upstream to the vendors' plants. And there are more safety people – they're coming in groups."

Safer plants are open to better ways of doing things. "My worst meeting was with an industrial facility that did not see the need," says Karla Lemmon, program manager, Honeywell Instant Alert (www.buildingsolutions.honeywell.com). She was visiting to describe an instant Web-based system for emergency and regular communications via land lines, cellular service, text messaging, e-mail, etc. The system can protect the surrounding community as well as the plant. "They said nothing has happened to warrant it," Lemmon adds. "It may take an incident for that company to understand."

Perhaps the most telling behavior takes place when an incident occurs without injury. "This does not mean that this incident should be forgotten," says Michael Hewitt, vice president, Global Workplace Safety Practice, DuPont (www2.dupont.com/Consulting_Services/en_US/). "Rather, it is important to acknowledge the incident and question why it occurred."

A safety-minded company will conduct a thorough incident investigation and try to capture and analyze the information from the event, reevaluate the process and make the necessary changes or corrections to ensure that the incident doesn't happen again. A less-safety-minded company won't take the time to investigate because there was no injury. "Just because no one got hurt in this particular incident that does not mean that the outcome will be as favorable the next time," Hewitt says.

How to get safer

If you see the opportunity to protect personnel or increase profits by improving safety, experts offer far more detailed advice than we have space to print on how to migrate to a safer culture. Several resources that express their consensus succinctly are posted on or linked through our Web site (see sidebar, "More at www.PlantServices.com/thismonth").

The two most often repeated keys: the drive to safety must come from the top, and it must become everyone's core value. "The main difference that I have witnessed is in the level of management commitment," says Hewitt. He emphasizes "Felt Leadership, a DuPont concept that defines leaders as those with visible commitment and passion for safety – and a dedicated involvement by all in the implementation of the overall safety management process."

Hewitt says Felt Leadership:

- Is easily observable
- Clearly demonstrates belief in safety
- Makes a positive impression on employees
- Demonstrates a personal commitment
- Pervades the organization
- Affects all employees
- Involves all employees

The principles of Felt Leadership include:

- Be visible to the organization
- Be relentless about time with people
- Recognize your role as teacher/trainer
- Develop your own safety functioning skills and pass them along to the organization
- Behave and lead as you desire others to do
- Maintain a self-safety focus
- Confirm and reconfirm safety as the number-one value
- Place continuous emphasis and clarity around safety expectations

- Show a passion for zero injuries, illnesses and incidents
- Celebrate and recognize “zero” successes

Every employee has critical responsibilities to a safety culture:

Finance: Understand and publicize the business value of good safety performance.

HR: Develop guidelines that embody good safety performance and leadership as performance indicators used in promotion and pay increase considerations each year.

Supervision: Uphold full responsibility for the safety of every individual working in their crew and ensure that each and every employee receives the necessary training to perform their jobs safely.

Technicians and operators: Maintain individual responsibilities to respect safety procedures and make sure their fellow workers also are adhering.

Safety is worth the trouble. “It’s not just about the company and the bottom line,” says LaCook. “When each person goes home to their family alive and intact, it keeps families together. Think about that.”