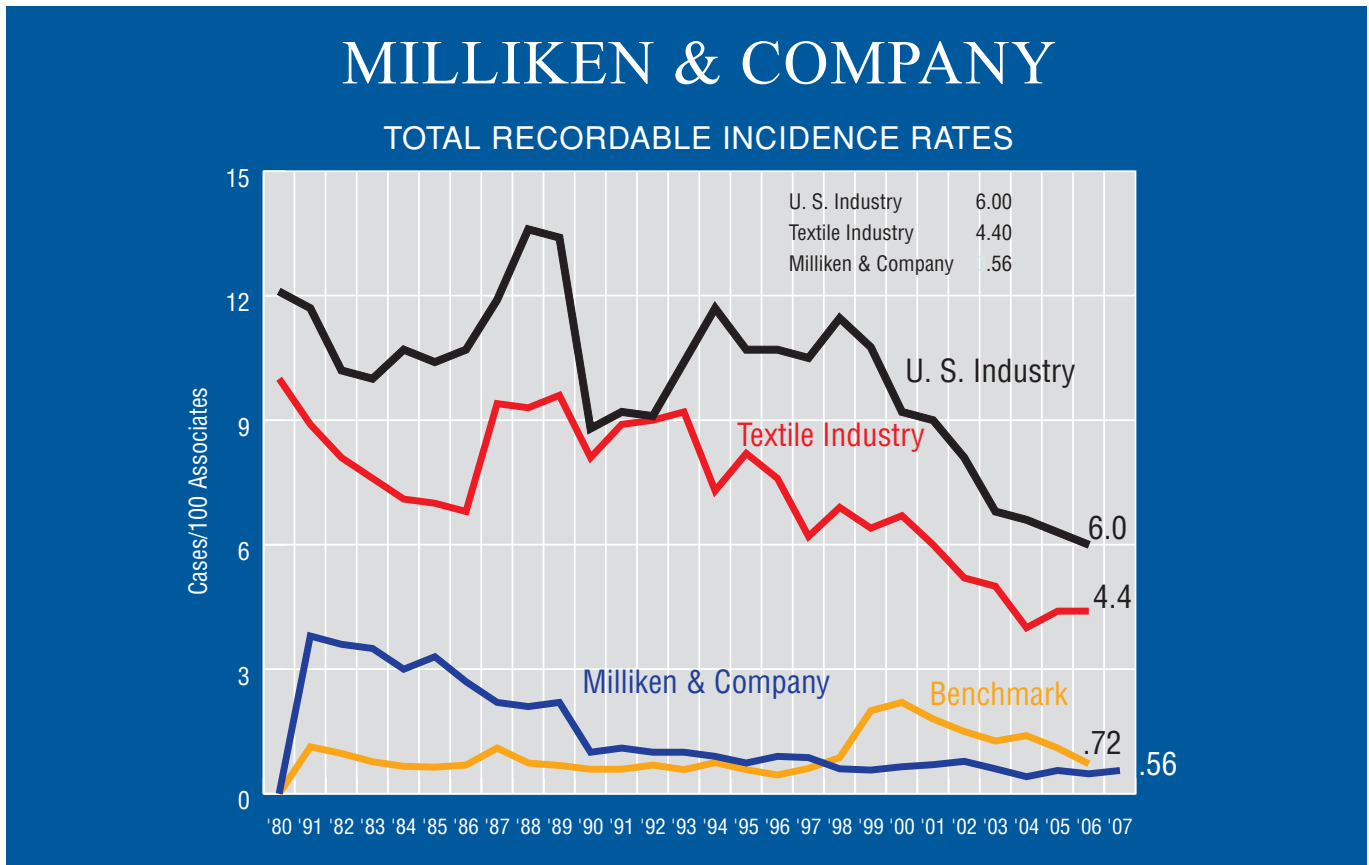


## Milliken Safety Process™



## AN EVOLUTION IN MANUFACTURING SAFETY

### APPLYING THE MILLIKEN SAFETY PROCESS™ TO PRODUCTION OPERATIONS

Milliken's employee-centric approach to improving safety is designed to build an organic, internal capability that is permanently infused into the organization. Milliken has shown that there is a clear connection between safety and quality, which leads to measurable productivity improvements and a direct impact on profitability.

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## White Paper: Applying the Milliken Safety Process™ to Production Operations

—by Barry Rosenberg

**M**illiken & Company has turned on its ear the long-held belief in manufacturing that safety is something that companies only do grudgingly, leading to half-hearted efforts that expend resources but have little affect on actual employee safety or productivity.

By contrast, Milliken has shown that a dedication to safety and quality in production has led directly to it thriving in the highly competitive, global textile and chemical industry. In fact, Milliken is one of the last, major American textile manufacturers to survive the off shoring of the industry.



Developing world-class safety and quality in global organizations doesn't come easily. In the case of Spartanburg, SC-based Milliken, it was a two-decade-long journey that culminated in it winning both the Malcolm Baldrige National Quality Award and the Japanese TPM (Total Productive Maintenance) Excellence Award. Milliken is the only company in the world to have won both awards. The company has also been recognized by Occupational Hazards magazine as one of the safest companies in America.

Now Milliken is taking the lessons it learned over those years and has launched a new group called Milliken Performance Solutions™. Its charter is to help companies compress their learning curve and leverage Milliken's people and expertise to drive rapid results in the areas of safety and quality. Executives who have begun to implement the core processes of Milliken Performance Solutions™ estimate that partnering with Milliken has cut as much as two years out of their learning curve and has impacted a significant cultural change.

Core offerings of the new group include the Milliken Safety Process™ and Milliken Performance System™ (MPS™). They are daily management systems that overcome the limitations of conventional Lean and Six Sigma programs by providing a more comprehensive approach that leads to dramatic breakthroughs in employee safety, cost reduction, higher motivation and morale, increased customer satisfaction, and an overall cleaner, safer work environment.

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“There are not a lot of companies out there who have implemented safety and production management that has been learned from the Japanese,” said Craig Long, Vice President of Six Sigma and Quality. “This is not widespread knowledge in this country. We had to take 100 people to Japan to see it. It took us years of learning and implementation. Companies interested in doing the same don’t have to re-create it for themselves. For companies that want to speed up the process we have the credibility and can quickly educate their people, as well as audit their progress.”

MPS™ and the Milliken Safety Process™ are all about cultural and systems changes and not just about the application of tools. That’s why they apply to all manufacturing disciplines. It is about changing the way employees go about doing their job, not bolting on consultant-driven solutions that aren’t sustainable over the long term. It is a holistic framework that shows companies how to manage operations.

Milliken’s employee-centric approach to improving safety and quality is designed to build an organic, internal capability that is permanently infused into the organization. It is not processes for process sake. It is process for one reason—to drive results. Lean and Six Sigma, by contrast, are tools for problem solving. And tools can’t transform your culture.

“The problem with most initiatives is that they add work and everyone resists that,” said David Rowland, Corporate Director of the Milliken Performance System™. “We’ve made safety part of a daily management system that provides common language, common processes and common goals within a plant and within any and all plants in a company.

“It is a shift in roles from being reactive to being proactive. The idea is to work smarter, not harder, which frees up time to make more improvements. People like that.”

## RESULTS THAT SPEAK FOR THEMSELVES

What Milliken has accomplished in the area of safety at its Gilliland Plant in Laurens, SC, is indicative of what can be accomplished using the Milliken Safety Process™ and MPS™. At the risk of jinxing the company or its associates, the Gilliland plant has gone 400+ days since its last reportable injury and 2,100 days since a disabling injury (as of first-quarter 2008).

Granted, the Gilliland Plant is a typical high performing safety model plant; however, there are numerous Milliken locations that have significantly exceeded even this level of safety performance.

“Safety is a core value throughout Milliken,” said Wayne Punch, Milliken Director of Safety, Health and Security. “Every meeting begins with safety performances and records. By involving and empowering our associates, Milliken teams have built trust and integrity throughout our operations. If you don’t measure it you can’t



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track it, and if you don’t measure or track it, you obviously don’t care about it.”

What Milliken has shown is that there is a clear connection between safety and quality, which leads to measurable productivity improvements and profitability.

“The linkage between safety and quality is the foundation of the way the company does business,” said Punch. “Quality processes have to be linked with safety processes; you can’t have one without the other. And because safety is the foundation of all processes, safety will impact everything a company does from a business perspective”

The key thing about the linkage between safety and quality is that it is quantifiable. Through the process of Total Consequence Measurement, which is one of the key metrics within the Milliken Safety Process™, a company can measure the cause, control, and behavior (actions) of its associates.

Through the metric of residual risk reduction (R3), it can identify hazards and quantify risk. In one simple but effective safety improvement related to R3, Milliken stopped stacking heavy boxes so high that just moving them was a dangerous operation. Now they have their suppliers place a pallet between each layer of boxes so that they can be safely moved with a jack. Milliken returns the pallets to the suppliers so that there’s no out-of-pocket expense on the supplier’s part.

Knowing where the hazards and risks lie has let Milliken put countermeasures in place to mitigate potential accidents/incidents and reduce its risk factor across the entire company by 89 percent.

“Safety is good business; safety does impact the bottom line of profit and loss because when you hurt someone that is a loss that must be compensated for in both hard dollars and soft dollars,” said Punch. “

The hard dollar losses include medical costs, rehabilitation expenses, insurance premium hikes, long-term workers compensation and disability costs. As bad as that sounds, soft dollar losses are worse, and studies have shown them to be three- to four-times greater than hard dollar losses. They include extra wages and overtime that must be paid to replace the injured person, and the loss of that person’s productivity and efficiency—all of which creates a detrimental ripple affect throughout the organization by impacting delivery time to customers and ultimately leading to sales losses.

It is for those reasons that safety has a direct bottom-line impact that is real and significant.

“People are assets; people are what have made Milliken great,” said Mike Powell, safety practitioner for Milliken Performance Solutions. “Some companies look at safety administration from limited perspectives, but Milliken looks at it from multiple perspectives, including team interaction, empowerment and trust within our workforce. These factors, along with necessary resources and unwavering commitment, help underscore the sincerity and integrity of our process.”

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## SENDING A MESSAGE

“We want our associates to go back to their families and friends the same way they came in that morning to work for us,” said Teresita Young, safety practitioner for Milliken Performance Solutions™. “The most important thing we can do is use education, processes and tools to keep people from being injured.”

Company management sends a message to its employees that their safety and health is the number-one value in the company when they back up their words with actions and deeds. These includes: (1) educating and training its employees; (2) ensuring that every employee takes part in the process; and (3) giving people the tools to do their jobs in a safe manner.

“When someone is injured, we don’t say that they hurt themselves or did something wrong or careless,” said Punch. “Our leadership is totally accountable in protecting our people. That’s where you get the trust and integrity factor. Safety for world-class companies is part of operational excellence. Safety is good business.”

Safety has a longer history in Milliken than even its highly successful Six Sigma program and statistical approach to quality. It goes back to conversations between W. Edwards Deming, the legendary author and consultant who was credited with bringing the first quality initiatives to Japan in the 1950s, and Roger Milliken, the company’s chairman and former CEO, who inherited what was a small textile company in 1947 and over a half-century turned it into the world’s largest private textile manufacturer through a commitment to research and development, quality and safety.

“Deming told Milliken, ‘You want zero defects and no off-quality in your manufacturing operations, why would you settle for anything less with the people that work for you,’” remembered Punch, who has worked at Milliken for 35 years. “He saw both sides of the problem. Since that time, safety has become a core value along with quality, environmental issues, cost and customer service. Safety has emerged as first among equals as a company core value.”

Just as he was doing with quality, Roger Milliken put the company on a path that would take its safety processes to world-class level through education and training, a commitment of resources to training materials, and a promise from leadership to drive the process fully.

“Safety blazed the trail,” said Powell. “It was the springboard that allowed our associates to work together in teams or groups. Safety and quality are similar in that they both bring a methodical, systematic approach to problem solving”

Companies that have poor safety records are typically those that have not



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embraced safety as a critical core value. There's a clear lack of education, not on the part of employees but on the part of management, which hasn't spent the time or the money for training materials and for actual time spent training. Milliken associates, for example, must complete 32 hours of education before they even see the machine they'll be operating on the factory floor. This enables the new associate to be empowered to own the process.

"Companies with poor safety performance have not allowed their people to get involved and be empowered," said Powell. "Typically, there are no defined processes that include risk analysis and risk reduction, both of which are measurable."

Most companies that find themselves fighting fires all the time typically do so because they don't have a methodology or system in place for defining and measuring safety. Safety is measured not just from the standpoint of equipment, but from the actions and behavior of people—both of which contribute to safety incidents. The methodology to do that is readily available, however, through MPS™, which defines every safety process, identifies the methodologies used to implement those processes, and establishes "upstream" measurements (those that measure the percent compliance with a company's own rules, for example), as opposed to "downstream" consequence measurements.



"The bottom line is that companies that don't have a safety process in place can't communicate to their employees that they care about them because safety policy is little more than something written on a board somewhere," said Punch. "What companies need to learn how to do is engage their employees in the priorities and values of the company, and to help them get involved and empowered in order to take ownership."

"In most companies, safety is at best a program. In world-class companies it is a statistically significant process. The Milliken Performance System™ helps companies build a system of operational excellence that is built on a foundation of safety."

"MPS™ helps companies truly understand, identify and control risks by clearly outlining the steps necessary to inspect safety. You don't get what you expect, you get what you inspect."

## **A COMMITMENT TO SAFETY; A COMMITMENT TO QUALITY**

With the Milliken Safety Process™ and MPS™, the company's corporate values become the same as the associates' values in the areas of quality and safety. Associates help drive the process, but management is accountable for the outcome.

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So how long will it take a company that commits to safety and quality processes built on MPS™ to measurably improve its safety? And maybe more importantly, how much time must be committed to the process in terms of hours away from the job?

For Milliken the journey took more than two decades. For a company employing the business plan of MPS™, however, the same journey can be completed in one to three years.

In the first year, Milliken safety practitioners will make as many as a dozen site visits to a partner company, where they will meet with 8 to 12 hourly associates/employees who will become the core safety steering committee for the facility.

“It is a structured process journey developed at Milliken where we engage with the group and set up their new structure and organization to work as a team in an associate-driven process geared toward safety,” said Powell.

Those associates selected for that committee will be required to spend time away from their jobs to learn the principle of the Milliken Performance Safety Journey, and their work will have to be made up through overtime pay or by cross-training other employees to temporarily take over those jobs. As discussed, however, the time spent learning the Milliken Safety Process™ will pay dividends in safety, quality and productivity for years to come.

How can a company integrate safety into a culture that hasn't in the past made safety part of its belief system?

“They have to balance how to make it work in their culture, but safety is that important; it must be done,” said Powell. “If a company is patient and committed, they will see a return on their investment.”

Safety is so important to Milliken that it has become arguably the most important criteria for promotion.

“We always promote from within,” said Rowland. “It means more money and first shift hours, so promotions are important to our associates. Safety points are more important than seniority when it comes to judging who gets a promotion. It's safety, not seniority. In our company, safety is the Number One core value and is a condition of employment.”

Clearly, Milliken has shown that safety and health are the foundation for operational excellence.

“Companies that aspire to be world-class must have the safety and health of its employees as a core value,” said Punch. “Safety and health are personal to every human being and will impact their motivation and morale. This is where integrity is built and trust is earned.” ◆

*Barry Rosenberg is the former business editor and new products editor of Aviation Week & Space Technology.*



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# MILLIKEN PERFORMANCE SOLUTIONS™

Milliken Performance Solutions™ can help you in your own Pursuit of Excellence. We have the skills, tools, experience and dedicated professionals that can help you solve current problems and lay a foundation for continuous growth. Whether you are a continuous process or discrete manufacturer, Milliken Performance Solutions can help you improve your performance.

If you would like to learn more about Milliken Performance Solutions™, please visit our web site, <http://www.millikenperformancesolutions.com/>, or contact:

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