

SECRETS OF THEIR SUCCESS

AME announces 2016 Excellence Award recipients

BY SUSAN FOTOVICH MCCABE

Years of hard work and a devotion to lean earned four manufacturing plants and one research and development center the coveted 2016 AME Excellence Award. This year's recipients are Accuride de Mexico, Monterrey, Mexico; Goodyear Innovation Center, Akron, Ohio; Littelfuse, Wuxi, China; MillerCoors Trenton Brewery, Trenton, Ohio and O.C. Tanner, Salt Lake City, Utah.

Each of the five companies took part in a highly competitive process that included providing a detailed, data-filled Achievement Report on the company's lean journey and success. Judges narrowed the list and conducted site visits before selecting 2016 award recipients. Final award recipients were selected based on the combined scores from their achievement reports and site visits.

AME instituted the Excellence Award with the intent to help accelerate an organization's improvement effectiveness. Applicant companies'

accomplishments over the past three to five years are evaluated based on a set of criteria that detail a lean systems model for manufacturing excellence, including:

- 1) Policy deployment process (management system, human and organizational development).
- 2) Safety and environmental health.
- 3) Manufacturing and business operations (waste; unevenness; fluctuation and variation, or mura; overburdening people or machines).
- 4) Extended value stream management (product development, supplier development and procurement).
- 5) Plant results (quality, cost, delivery and profitability).

Companies can nominate themselves, a supplier or a client by sending an email with the company name and contact information to nominate@ame.org. For 2017, the deadline for the intent to apply and plant profile is Jan. 27, and the achievement report is due March 13. Recipients will be recognized at the October AME International Conference in Boston. 

- **Accuride de Mexico**
Monterrey, Mexico
- **Goodyear Innovation Center**
Akron, Ohio
- **Littelfuse**
Wuxi, China
- **MillerCoors Trenton Brewery**
Trenton, Ohio
- **O.C. Tanner**
Salt Lake City, Utah



An extensive Visual Operating System (VOS) supports various forms of continuous improvement training.

Accuride de Mexico (AdM)

Monterrey, Mexico

The Accuride Corp. steel and aluminum wheel production facility in Monterrey, Mexico, has even more reasons to celebrate its 2016 AME Excellence Award. The plant is the fourth Accuride facility to receive the highly respected award in the last three years. The Monterrey plant began its lean journey in earnest in 2011 as part of Accuride’s company-wide lean implementation, which also earned its plants in Henderson, Kentucky; Erie, Pennsylvania; and Rockford, Illinois AME Excellence Awards in 2014 and 2015.

The 226,000-square-foot Monterrey facility is a leading producer of steel and aluminum wheels for the North American commercial vehicle industry. It directly supplies OEM customer assembly operations in Mexico. According to Accuride Vice President, Quality/Lean Management Systems and EHS Jd Marhevko, there’s no end to what Accuride can achieve with its lean approach and culture.

“Our leadership drives culture. That’s what’s unique for us. Our CEO knows value stream mapping with the best of them. He has extensive knowledge of lean. Our entire staff has a similar level of

lean skills to implement it at any level,” Marhevko said.

Robust initiatives such as the X-Matrix (a term Accuride uses to identify its policy deployment process) and other continuous improvement strategies shape Monterrey’s processes and products. The X-Matrix, a form of hoshin kanri, encompasses the customer voice and objectives. An extensive Visual Operating System (VOS) supports value stream mapping, pull systems and various forms of continuous improvement training.

Accuride has developed a core set of results from its lean execution. With a 50 percent reduction in lead time, Accuride’s plants have been able to improve productivity by an average of 50 percent and reduce overall costs per unit (CPU) by an average of 20 percent. The AdM team equally experienced this type of success across its key value streams and multiple transactional processes. The power of these results has enabled customers to rely on AdM to source on-time, high-quality product when needed.

According to AdM’s Continuous Improvement and IT Manager Ray Trevino, continued challenges include rapidly changing market trends.

Chinese and Japanese subsidies are challenging North American commercial vehicle component suppliers by illegally dumping steel and aluminum products into the market. Less than five years ago, the steel wheel market was 80 percent of AdM’s business. Today, it is about 40 percent. Conversely, aluminum wheels represented about 20 percent of AdM’s business. It has grown to 60 percent today. That trend is expected to continue, Trevino says.

Accuride leverages a corporate-wide Quality/Lean Management System (QLMS) Council, which includes four AdM representatives. The council meets monthly to review the X-Matrix and annually to align its initiatives with Accuride’s strategies. Council meetings include a lessons learned session. Accuride holds a quarterly review of its business lean status for every key process across the corporation.

The Monterrey facility employs approximately 370 people, all of whom bring lean to life, Marhevko says.

“From a people perspective, we help our associates understand lean and how they can help. We call that AccuPride,” she said. ●



Goodyear releases an average of 1,500 new products globally every year. The 4,000 learning cycles needed are planned using a visual management system in both Goodyear Innovation Centers (Akron and Luxembourg).

Goodyear Innovation Center

Akron, Ohio

Applying lean to a company's innovation or research and development process isn't the norm. It generally begins in operations. However, the Goodyear Innovation Center in Akron, Ohio, has proven lean is just as effective — if not more so — when implemented in these areas. The success Goodyear has experienced from thinking outside the box earned the company a place among this year's AME Excellence Award recipients.

"Most companies implement lean in manufacturing operations first because there is a lot of knowledge on that subject," said Goodyear Lean and Six Sigma Senior Master Blackbelt Norbert Majerus. "The application of lean upstream in an R&D organization can avoid a lot of problems downstream and set the company up for more successful new products."

With two innovation centers and several development centers in the U.S., Europe and Asia, Goodyear is one of the world's largest tire companies. Each year, it introduces about 1,500 stock keeping units (SKUs) and performs 4,000 learning cycles to develop

its products. Typically, most companies implement lean as a cost-cutting measure, Majerus says. That was not the case for Goodyear. The tire manufacturer launched its lean initiative in 2006 with a focus on how R&D could create more value for the customer and the company.

Goodyear already had an impressive record of quality and employee safety prior to embracing lean. Since implementing lean, on-time delivery improved more than 70 percent, while cycle time was reduced by 75 percent.

In the beginning, one of Goodyear's biggest challenges, according to Majerus, was to convince its associates and leadership that a lean implementation in the innovation center was the right thing to do.

"There was not a lot of positive benchmark data about lean implementation in R&D. For that reason, it was important for us to show results as soon as possible, and it was helpful that the results could be traced to the bottom line," Majerus said.

Although the Innovation Center's engineers were slow to warm up to lean, he

says, they now have more satisfaction in doing their work today. In fact, they spend less time on poor processes and can concentrate on what they like better: creating great new tires.

AME Excellence Award assessors credited the facility's "well-conceived and practical way of defining and organizing the company's innovation system." Specifically, assessors said the system promoted the flow of development work, maximized customer value, and supported the cultural traits of creativity and teamwork.

Of course, lean is a journey. Sustaining the effort over time is a daily focus at the Goodyear Innovation Center. According to Majerus, the center's R&D leadership quickly understood that the effort had to be institutionalized as soon as it was fully developed. This was accomplished, he said, by creating a lean operations function. The group responsible for this effort oversees day-to-day operations, as well as the development of standards and continuous improvement.

"Receiving the AME Excellence Award was certainly a proud moment for our associates," Majerus said. "It gave us reassurance that we were on the right track in our long journey." 



The Wuxi site leadership accepts the AME Excellence Award.

Littelfuse Wuxi, China

With more than 10,000 employees across 40 sites in the Americas, Europe and Asia, safety is No. 1 for Littelfuse around the globe.

Chicago-based Littelfuse is the world leader in circuit protection, with growing platforms in power control and sensing. It serves electronics, automotive and industrial industry customers around the world. Its products include fuses, semiconductors, polymers, ceramics, relays and sensors.

The Littelfuse improvement journey began in 2010 with a six sigma program. One year later, the company embraced lean as a whole, staffing up a global lean group to provide training at each of its manufacturing sites. Each site committed to dedicating 1 percent of the total plant population to the lean initiative. Leveraging an array of lean tools and kaizens, the plants began to drive out waste. A comprehensive Total Productive Maintenance (TPM) system quickly followed, as well as the identification of True North metrics. While lean originated in Littelfuse manufacturing operations, the effort quickly spread to supply chain and administrative offices. Eventually,

the company took its lean initiative to its suppliers in an effort to enhance their own focus on efficiency.

“We have completed many projects using lean principles that yielded great results, and we truly feel that lean is part of our culture,” said Mary Yang, Wuxi site lean manager. “We are proud of all the work we have done during our lean journey. However, our proudest moment was when we found out we received the award from AME. In part, it meant that lean professionals outside of Littelfuse recognize the good things we are doing, and our commitment to the lean journey.”

The Wuxi facility’s commitment to lean has paid off. Customer complaints are down from 60 in 2010 to 11 in 2015. Inventory has been reduced by 34 percent. And its on-time delivery is up to 99.7 percent. Tracking employee commitment to lean is equally important to Littelfuse in Wuxi. In 2016, 92 percent of its direct and indirect labor received at least 12 hours of lean training. More than 90 percent of its professional staff and 95 percent of management had accrued at least 40 hours of lean training. The company conducted 81 kaizen blitzes (three

to five days each) in 2015. It is expected to complete another 63 blitzes by the end of 2016.

“Implementing lean in the office areas provided some challenges in the administrative offices. The good news is that once office associates opened their eyes to lean and the benefits and realized it really could work in their area, they embraced it quickly,” Yang said. “We have seen impressive results in many administrative areas.”

The AME assessors noted the facility’s safety achievements, including the fact that each associate is expected to submit one safety suggestion every month. Additionally, assessors noted the company’s well-documented work processes, which have clear, step-by-step instructions and visual aids for associates to access from their workstations.

“In Wuxi, people are passionate about improvement, and there is a good understanding of lean throughout the entire workforce,” Yang said. “We will embed lean as the DNA of our culture by cultivating lean thinking across all levels of associates. We understand the continuous improvement journey is one that never ends, and we will happily rise to the challenge.”

MillerCoors Trenton Brewery

Trenton, Ohio

With a commitment to quality, innovation and sustainability, renowned beer giant MillerCoors is driven to be the best. The road to the top is paved with an army of engaged associates carrying out the company's formula for lean. As an AME Excellence Award recipient, the MillerCoors Trenton brewery has proven it measures up to the company's expectations.

Opened in 1991, the Trenton brewery has the capacity to brew more than 10 million barrels of beer annually, which includes Miller Lite, Coors Light and Miller High Life. The plant occupies 1,100 acres, which includes two and a half acres of wetlands and 30 acres of managed prairie grass. It is surrounded by more than 500 acres of local farming operations. Protecting the environment is critical for each of the company's seven major breweries. The Trenton Brewery led the charge for sustainability. The plant hasn't sent garbage to the area's landfill since 2009. In fact, it was the first of all of MillerCoors' breweries to achieve landfill-free status. In a first for the beverage industry, MillerCoors earned landfill-free verification for all of its major breweries from the Sustainability Division of NSF International, a global nonprofit public health organization.

“Each employee has an individual role within the organization, but we work and win in teams.”

DENISE QUINN,
TRENTON BREWERY PLANT MANAGER

“When MillerCoors Trenton Brewery became landfill free, it meant 99.8 percent of employee and process waste was reused or recycled, such as aluminum, glass and cardboard. This is still true today. The rest of the waste, including floor sweepings, goes to a location in Indiana where it is burned for energy,” said Trenton Brewery Plant Manager Denise Quinn.

By design, Quinn said the Trenton Brewery incorporates a high performing, high commitment workforce, skilled at “maximizing each employee's effectiveness, productivity flexibility and responsiveness to consumer demand.”

In return, MillerCoors reinforces its compensation systems, employs a compatible labor relations strategy and empowers its workforce. In fact, during its Excellence Award site assessment, judges noted the impact a dedicated workforce has had on the company's lean success. Specifically, judges applauded the strong relationship between MillerCoors and the local union in empowering teams to collaboratively produce world-class business results.

MillerCoors relies on the principles, practices and processes of its MillerCoors Manufacturing Way. The company's daily adherence to goals and standard work is integrated into team meetings, tracking and reacting to Safety, People, Quality, Service, Cost and Sustainabili-

ty (SPQSCS). The company's gemba walks, team meetings to evaluate performance metrics and immediate attention to problems and solutions has been a winning approach. Throughout the plant, electronic Short Interval Control and performance charts provide hourly data to drive quick-to-detect, quick-to-correct activity. Its focus on continuous improvement has led to notable results, including reducing the Trenton Brewery's water usage by 18 percent since 2011 and improving its energy intensity by 26 percent since 2011.

Ultimately, MillerCoors credits its employees for its lean success.

“Each employee has an individual role within the organization, but we work and win in teams,” Quinn said. “We give real-time feedback to each other so that we all have an opportunity to improve. We know our goals and we know how our actions support those goals. We celebrate our wins as a team, big and small.”



Team member routinely checks the short interval control board and makes equipment adjustments as needed.



A team at O.C. Tanner emblem manufacturing.

O.C. Tanner Salt Lake City, Utah

If you ask O.C. Tanner's leadership the secret to the company's manufacturing success, the unanimous response is always a nod to its employees. The Salt Lake City, Utah manufacturer develops strategic employee recognition and reward solutions, including manufacturing employee appreciation trophies and emblems (such as coins, charms, lapel pins and zipper pulls). Most notably, O.C. Tanner was the creative genius behind the design and manufacture of the athlete medals awarded at the 2002 Winter Olympics in Salt Lake City, and currently makes the Olympic rings awarded to all U.S. athletes at every summer and winter Olympic competition.

"Our people are the real magic behind lean at our company. When you see our people at work, you see them for who they are. It's genuine and authentic," said O.C. Tanner Kaizen Blitz Leader Gordon Hayes. "There's a pride in the company culture that happens on a weekly basis. When a team proudly shows you what they did, that's a payday that happens everyday."

It's no surprise that the AME Excellence Award assessment team touted the company's role in leading a positive culture — a lean journey O.C. Tanner started 20 years ago. In fact, O.C. Tanner shifted its culture away from emphasizing what an employee can do with his or her hands to what they can contribute with their minds and hearts. O.C. Tanner ranks no. 61 on the 2016 FORTUNE 100 Best Companies to Work For®.

The O.C. Tanner policy deployment framework is no doubt the other secret to its success. When the company started its lean journey, its clients could choose from 6 million possible product options. O.C. Tanner was challenged with producing 13,000 different items (one at a time), daily, with no client forecast in sight. With 28 separate manufacturing departments at the time, its big-batch equipment was designed for volume production, but was a barrier to one-piece flow. O.C. Tanner engineers right-sized monument equipment by designing and building the plant's own machinery. They implemented lean's 7 Principles of Engagement to meet many of its right-sizing challenges.

Today, O.C. Tanner's one-piece flow cells, or mini-factories, have resulted in lower costs, shorter delivery time, well-controlled inventory and higher quality. In fact, its one-piece-flow production system is considered one of the best models in the country. Its lean model is the focus of an annual workshop the company hosts on behalf of AME's Southwestern Region. Its 2017 workshop and tour is February 8-9.

O.C. Tanner has been successful in sustaining its lean effort, even leading to achievements in innovation. This year, the company has fielded more than 250 requests for new products, resulting in a 30 percent increase in revenue.

"Our employees understand that lean will make their day better. They've bought into it," Hayes said. "There's nothing more important than valuing our people. Everything begins and ends with them and will continue to do so. That's how we move forward. Companies would do well to have leaders who truly value their people. That's how you make sure you keep the light alive." ●