Success Story: IMC Connects Lumax with The Learning Factory to Develop New Product

written by admin | September 26, 2013

Lumax Industries is a leading manufacturer of high quality, custom industrial, commercial, and institutional fluorescent and LED lighting fixtures. Founded in 1976, Lumax is privately owned and operated with a 150,000 square foot manufacturing facility based in Altoona, PA.

The company is a Made in the USA manufacturer, offering a complete line of fluorescent and LED fixtures for many lighting applications, including recessed parabolic and lensed troffers, recessed indirect, surface mounts, strips, channels, and industrial units, wraparounds, task and wall brackets, and vandal and security lighting.

SITUATION

Lumax's success can be attributed to a mastery of all the latest manufacturing and product technologies across the entire lighting spectrum; a well-established reputation for capstone quality and superlative customer service; and a willingness to design, develop, and manufacture lighting fixtures for an ever evolving and more specialized, technologically advanced marketplace.

Despite the company's rich history and ongoing success, Lumax's leadership

team also recognizes the importance of responding soundly to significant movements within their industry. With the growing momentum of LED technology, Lumax sought to explore the potential of an innovative LED industrial high bay light fixture.

SOLUTION

IMC Business Advisor Ed Zubavich connected Lumax Engineering Manager Rich Taylor with The Learning Factory, a program within Penn State's College of Engineering. The Learning Factory helps to provide engineering students with practical hands-on experience through industry sponsored and client-based capstone projects.

Taylor submitted a project proposal to have students design and fabricate two high bay LED lighting fixtures with stringent criterion for ambient operating temperatures, lumen output and distribution, ease of manufacture, and aesthetics.

"I can't say enough positive things about The Learning Factory, and I am thankful for the connection that IMC so proactively made. I truly felt like the students were a part of our team." – Rich Taylor

"I wanted to choose a project that would be brand new for us and not just a modification to an existing product," Taylor explained. "I wanted to start with a clean slate that would allow the students – who were senior-level engineers in an outstanding program – to be as creative as they want to be. I wanted to provide them that opportunity while also giving Lumax a chance to explore something beyond what we would normally pursue."

When Damian Rose, a project advisor with The Learning Factory and part-time instructor for the Department of Mechanical and Nuclear Engineering at Penn State, saw the Lumax proposal, he knew that the project would be a worthwhile endeavor for students. Rose, who is also an engineer at the Applied Research Laboratory (ARL) at Penn State, was exposed to Lumax products in ARL facilities.

"I was quite impressed with their product and knew that the company was one that believed in quality and innovation," Rose explained. "I felt that the project would give students the chance to work with a solid, innovative company on a project that combined many different aspects of engineering —thermal analysis, electrical work, CAD work, fabrication, and more." A team of five students worked on the project, with Rose serving as behind-the-scenes advisor and Taylor as the industry sponsor. IMC contributed funds to help formally launch the project.

Over 15 weeks, the students met with Lumax, presented multiple designs, regularly communicated with Taylor and abided timelines, and engineered a design that was aesthetically pleasing, worked thermally, and performed optically. They fabricated two fully functional prototypes that tested better thermally than LED high bay fixtures that were already on the market.

RESULTS

The students' hard work paid off in a big way. A panel of industry experts judged the project a second place award winner at the 2013 Student Design Project Showcase held on the Penn State campus. The "LED High Bay Light Fixture sponsored by Lumax Lighting" was among some 163 projects at the event, including 115 senior capstone projects involving 560 seniors.

Lumax has since put the product on display in their Altoona showroom and clients and sales representatives have responded with enthusiastic feedback. The product was also a highlight of the Lumax booth at LIGHTFAIR International 2013, touted as the world's largest annual architectural and commercial lighting trade show and conference.

Success Story: IMC Helps Videon

Central, Inc., Use QRM to Boost Quality and Inspire Innovation

written by admin | September 26, 2013 astdstsat

Success Story: IMC Assists Lycoming Engines in Realizing Significant Cost Savings with Lean

written by admin | September 26, 2013

Lycoming Engines is the leader in the piston aviation market, producing more piston engines for general aviation manufacturers than any other company in the world.

Headquartered in Williamsport, Pennsylvania, Lycoming is a global operating division of Textron's Avco Corporation subsidiary, and an operating unit of Textron Systems, specializing in the engineering, manufacturing, assembly, test and support of piston aircraft engines. The company employs 470 people.

SITUATION

Lycoming Engines realized that remaining competitive in a downturned economy requires ongoing innovation, enhanced efficiencies and involvement from all members of an organization to be alert and focused on continuous improvement and opportunity. Lycoming Engines began what would be the underpinnings of an aggressive initiative to have all levels of the organization undergo training in Lean manufacturing.

According to Gary Naculich, Manager, Transition to Production, Lean training was an integral part of the organization's growth strategy.

"Identifying ways to remove waste from our processes is a significant component of keeping Lycoming Engines a thriving business. Our approach is always to have an eye on the future and to be prepared. Our hope was that LEAN would help us to cut back on waste, be more efficient and remain optimally productive," said Naculich.

Naculich reached out to IMC-PA, a NIST MEP network affiliate, to assist in building a strategy to accommodate an aggressive schedule, variety of skill sets and potentially diverse feelings about the initiative.

As a result of IMC's assistance, Lycoming Engines was recognized as the global premier award process for operational excellence, has twice gone 1 million hours without a lost time injury, and was recognized as one of Cessna's 'Top Suppliers' by earning their STARS supplier award three consecutive times.

SOLUTION

IMC business advisors and Lycoming management developed a master plan to engage the entire organization in Lean. The first step was to send several employees to IMC Lean 101 training in order to better familiarize them with the principles and help them determine the merits of a full-scale training initiative for the company.

To achieve buy-in from Lycoming's union workforce, management sent several union members to Lean 101 training to evaluate its worth for the company. Union members returned from the training enthusiastic about Lean and fully engaged. IMC planned a variety of training scenarios, including employee participation in scheduled workshops as well as IMC training sessions conducted directly in Lycoming Engines facilities.

Lycoming Engines Manager of Proposals and Contracts, Mary Fourney, said, "A key factor in the success of the program was IMC's ability to work with employees at all levels and build trust. Some of our folks had the perception that Lean meant losing their jobs. Their fears were alleviated, though, due in large part to how IMC engaged them in the process and the obvious positive benefits that Lean could potentially have for Lycoming Engines."

RESULTS

- Realized \$50M in cost savings
- Improved safety by 30%
- Improved on-time delivery from 40% to 98%
- Awarded Shingo Silver Medallion in Shingo Prize program

Success Story: Northway Industries, Inc., Implements Web-Based Solution with IMC's Assistance

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Northway Industries, Inc. is a privately held company employing 120 people that

provides quality contract manufacturing services to a variety of clients.

The company was founded in 1966 and utilizes high-pressure laminates, melamine, vinyl, paper, and wood veneer products to produce cabinets, countertops, work surfaces, fixtures, and more. Operations consist of CNC controlled machining, milling, routing, and banding. Primary markets served include OEM suppliers, retailers, schools, and institutions.

SITUATION

Beginning in 2005, Northway partnered with IMC, a NIST MEP affiliate, to engage in lean and cellular manufacturing consultation and implementation. **The company** was re-engineered from a mass-production shop to a mass-customization shop, allowing Northway to be more responsive to its market which needed more small-batch custom orders.

As a result of the implementation, the company saw an increase in small batch orders and single piece flow orders. This significantly boosted the volume of information necessary to initiate and complete work. It became apparent that Northway's legacy systems were becoming less effective and less accurate with this changing business model.

While the changes implemented during the first IMC project allowed Northway to expand capabilities and machine and fabricate at faster rates, the delays caused by managing an increased volume of critical information were hampering true growth. Northway continued to work with IMC to tackle the new problem and develop an information system that would allow project data to be managed more effectively.

The robust, scalable information system that was developed with IMCs assistance is capable of pulling together details about a wide range of business operations.

SOLUTION

The project began with an objective of creating a web-based project scheduling

system. The initiative soon grew to be a complete information system that linked all aspects of the project and client relationship into one centralized, online location.

The system includes a project-based scheduling system, contract documents, customer purchase orders, production documents, a materials database, RFID (radio-frequency identification) order tracking, company policy and procedure documents, quality control information, and sales-related communications. The new system allows both employees and customers to log in and see relevant project-specific data.

RESULTS

- \$2 million in increased sales
- \$100,000 in cost savings
- \$75,000 in new investment

Success Story: IMC Enables Railroad Company to Lay Tracks for Continued Success

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ORX Railway Corp. is a manufacturer of rail wheel sets. The roots of ORX are buried deeply in the railroad industry, planted

over a century ago by co-founder and president Glenn Brandimarte's grandfather - an Italian immigrant who found employment quickly on the tracks and dedicated his life to his work.

The tracks for ORX's success were set by nearly a century of experience, dedication, and innovation which still drives the company today.

SITUATION

ORX was required to carry out internal quality audits to verify compliance with the Association of American Railroads, Specification M-1003, and their own current quality assurance practices. IMC, a NIST MEP affiliate, was contacted to perform the audit. IMC contracted with a third-party consultant and former employee who performed previous audits in order to help with the latest one.

The company was able to use the audit process and results to develop an action plan to strengthen their processes and make the entire system more efficient and effective.

SOLUTION

IMC and its third party consultant conducted a two-day internal audit of ORX's quality management system to verify compliance with stated requirements. The Quality Assurance System Evaluation Checklist provided by the Association of American Railroads (AAR) was used to conduct this audit. Afterwards, a written report was prepared with any non-conformances identified and the findings reviewed with the company.

ORX was able to identify and implement corrective action for nonconformances and successfully pass the AAR audit of their system. The IMC provided additional continuous improvement coaching as well.

RESULTS

- \$500,000 capital investment
- \$10 million in retained sales
- \$10,000 in cost savings

Success Story: Pik Rite Prepares for New Leadership Roles and Increased Production with IMC's Guidance

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Pik Rite Inc. designs and manufactures innovative, quality-built vegetable harvesting equipment, agricultural manure spreaders, commercial waste-handling equipment and hydroseeding units for a growing national and international market.

The company and its 50 employees are located in Lewisburg, Pennsylvania.

SITUATION

Pik Rite was in challenging, yet highly positive circumstances — production was in the process of doubling. That situation meant that the company needed to fill several

production leadership roles quickly. General Manager Randy Beiler turned to the IMC, a NIST MEP affiliate, for their experience and expertise.

I often recommend IMC to other manufacturers as an innovative source in solving problems and eliminating bottlenecks. – Randy Beiler

SOLUTION

Training current employees for their new leadership roles became a top priority, along with executive coaching. IMC developed a project to work with management on strategic topics and train supervisors on the fundamentals of being an effective manufacturing floor leader. The training program for those in new supervisor roles was held over a 10-week period, consisting of weekly three-hour sessions.

Training covered a spectrum of leadership fundamentals, including topics such as : introduction to supervision; managing and measuring team performance; basic communication skills; teamwork for supervisors and group leaders. The sessions were split between two separate groups of employees taking classes on different days of the week.

Beiler deems the initiative a complete success. "The project improved leadership capabilities of existing management, helped to build more leaders, and educated employees on the basics of economics and expanded their business sense."

The project fulfilled the main objective of preparing employees for new leadership roles in order to manage increasing production requirements. According to Beiler, "We promoted from within, gave our employees an opportunity to grow, and doubled our production in a two year period."

RESULTS

- \$2M in increased sales
- 20 jobs created
- Cost savings of \$250,000
- More than \$700,000 in new capital and workforce investments