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## Syracuse Castings – Lean Strategies Enable Eight Years of Growth



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Founded in Cicero, NY in 1971 by Harry Pulver, Syracuse Castings Sales Corp. grew from just a few employees in 1978 to over 90 people in 2005. Syracuse Castings manufactures steel drainage grates for road construction and aluminum access hatches for subterranean pumping equipment pits. Since 1995, Lean Manufacturing has been a key strategic driver to Syracuse Castings' success. Their journey shows that the need to continually reassess operations through a Lean perspective never changes.

### Choosing a Team-based Lean Approach

Mark Pulver took over for his father as Vice President & General Manager in 1997 after earning his MBA from the Syracuse University Executive Program. The Executive Program helped Mark form a vision of empowered employees taking responsibility for their jobs. This was a dramatic change from the top down management style Mark learned as an Industrial Engineer that had driven the initial success of the company. Mark recalls, "Command and control management began to hamper growth, and we were at the point where I had to do something."

Knowing that the first step to Lean is the hardest and the most critical, Mark shared his vision at an employee meeting. He communicated



his confidence in the employees taking an active role in creating a more positive, productive and rewarding work environment. A Management Steering Team was formed followed by Process teams for steel and aluminum product lines. Cross-functional teams were formed for Quality, Safety and Customer Service. In a stroke of genius, Mark organized three regional Sales Teams staffed by cross-functional representatives from yard operations, trucking, outside sales, inside sales and manufacturing. The Sales Teams replaced existing departments and controlled orders from the time an order was received to the time it was shipped. They also responded quickly to all customer complaints. These goal-oriented sales teams generated record sales while manufacturing process teams increased productivity by 20 to 45% and reduced lead times by 50%. The reduced lead times delighted the customers during the most active time of the year.

According to Tim McKernan, Operations Manager at the time; "We challenged our people to reduce overall costs of making our products, and they took on the challenge!" Manufacturing throughput increased by

25% while production costs dropped by a 15-20%. A revised plant layout contributed to the increase in throughput while eliminating the need for a 10,000 sq. ft. addition. Relocating the "monument", a monster press, the bottleneck in production of steel grates, contributed to the increase in throughput and opened the door for other improvements.

### **The Evolution of New and Improved People Skills**

The dramatic cultural changes placed demands on every employee to improve their people skills. These skills were critical to a team environment. Additional decision making skills were necessary as people took on more responsibility for their work. Training in team building, decision making and problem solving facilitated the development of teams and individuals. Management also faced changes. When asked in November 1998 how things were going in his new role as Operations Manager, Tim responded: "It was very different for me. I called on a whole different set of skills and I constantly redefined my role." Mark Pulver had something similar to say. "We were all making the transition from 'command and control' management to learning how to best help our teams accomplish their goals. It required a different set of skills to make this transition but we were determined to make it work."

The determination continued as teams broke down walls between departments by forcing people to work together within a flattened organization. Production kept pace with increased sales, but not without problems. Once again, faced with a need to expand the existing building, management began reading books on Lean Manufacturing and visiting local companies involved in implementing Lean. What they learned delivered a wake up call to look at their factory in a new way. Lean was a systematic and sustained method to eliminate waste from the process.

Teams were revitalized across the organization and asked to take a hard look at their manufacturing processes. They learned that every machine was in the wrong place according to Lean. A cross-functional Lean project team, led by Tim, developed with a new Lean plant layout. The team then worked with product family teams to plan and implement the move, involving every machine, including the Monster Press that now became part of a work cell. One employee remarked, "I'm really glad we did it. It makes our job easier. We now have more room." All 80 employees received a performance bonus of \$925 that year.

Mark Pulver continued to see great potential for the company as sales of aluminum hatches spread across North America and the steel business was expanding into Pennsylvania. Syracuse Castings' increased capacity and decreased lead times gained through past Lean Manufacturing activities allowed them to take advantage of a market upturn and increase their market share. He contacted TDO for a productivity assessment to be sure the company would be ready when another increase in sales developed.

In February 2003, growth in business created distractions that caused the Lean initiative to falter and the need to expand the plant could no longer be avoided. The need for a National Sales Manager was filled by Tim McKernan who was already acting in that capacity in their flat organization and a new Operations Manager, Joe DeYulio, joined the company just as the construction on the 10,000 sq. ft. addition was being

completed.

### **New Lean Initiatives will Take Growth to New Heights**

Upon completion of the addition, the Lean initiative was reinvigorated. Under the direction of Joe DeYulio, the manufacturing products were segregated into two value streams that became two separate factories under the same roof. The newer aluminum product family was laid out in the new expansion following a U shaped flow entering and exiting a door at the back of the facility. The older steel product family entered a U-shaped flow through the front door. To continue facilitating the flow of the material, teams determined where to place kanbans. These kanbans facilitated the pull of material through the value streams and minimized the amount of work in process inventory by more than half.

As Syracuse Casting continues to grow, the Lean initiative prospers, supporting that growth. Future activities, including kaizan events and the implementation of a performance based compensation plan in collaboration with Nucor Auburn, will continue to improve their standard work and drive waste from process and products. Harnessing the energy of the people directly involved with the daily production continues to yield great ideas and savings as the foundation for Syracuse Castings to successfully grow into the future.

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