Success Story: Lee Container

Container Company Cuts Costs through Process and Energy Improvements

In 1989, Donald Lee opened the doors of Lee Container in Valdosta, Georgia, and began making blown plastic bottles for customers in various industries including automotive and agricultural chemical products. In just four years, the company’s business had outgrown its current facility and Lee moved the company into a new space in his hometown of Homerville, Georgia, expanding from three production lines to seventeen.

Since that time, the company has continued to grow. It now employs over 250 people in Homerville and has also purchased facilities in Iowa and Texas. Robert Varnedoe, a family member and one of the original Lee Container employees, became president in 2012.

Since meeting with the GaMEP, Lee Container has:

- Improved communication, teamwork, and morale by implementing MDI.
- Reduced their changeover time by 38%, which will save the company approximately $68,000 per year.
- Invested over $16,000 in equipment upgrades, including conversion to LED lighting and improvements to HVAC systems.
- Lowered the company’s energy costs by over $27,000 per year, which has already paid back the initial investment.
- Used the data and information gathered to help them make decisions about future equipment expenditures, process improvement strategies, and energy management goals.
- Hosted a benchmarking event to share what they have learned with other companies in South Georgia.

Situation

In 2017, Varnedoe began to think that there were opportunities to cut costs and improve the plant’s productivity during their set-up and changeover process. Lee Container has been a long-time member of the Georgia Manufacturing Extension Partnership (GaMEP) at Georgia Tech’s Advanced Manufacturing Consortium (AMC), so he asked Hank Hobbs, GaMEP South Georgia region manager, for help implementing some of the tools discussed at the AMC meetings and other trainings that they had attended throughout the years.
Solution

After visiting the plant and speaking with Varnedoe about the company’s needs, Hobbs recommended the Managing for Daily Improvement (MDI) system of communication and management. Working with Charity Stevens, GaMEP project manager, a team of employees designed and installed four MDI boards, at strategically selected production lines. These boards aimed to help the team track production numbers, provide information and reminders to staff, and create a place to note issues that needed to be resolved.

Then, each day the management team walked the floor, using the boards as a guide for short meetings with the staff working on each of the selected production lines. The information collected during these meetings pointed to opportunities for improvement during the set-up and changeover process between product lines, but also helped them find opportunities to lower costs in other ways.

“I can’t say enough good things about our experience working with Georgia Tech and the IAC. We have already implemented many of their recommendations and have seen great results.”

– Robert Varnedoe, president

“Even if the company already has a good idea of where they could improve, MDI gives them a good foundation and data that can help them find all of the factors that contribute to the results that they are currently seeing. Then, rather than just focusing on a point solution that may not give them the long-term results that they desire, we can take an approach that helps them improve their entire system,” said Stevens.

Stevens returned and helped the team complete a Single Minute Exchange of Dies (SMED) event, videoing and analyzing the changeover between product lines on a certain machine. This event led to a significant decrease in scrap and downtime, while improving the utilization and safety of the workspace.

In addition, Hobbs helped the company set up a no-cost energy and sustainability assessment, provided by the U.S. Department of Energy’s Industrial Assessment Center (IAC). Because the plant’s utility bills were often over a million dollars annually, the company thought they may be able to lower their costs even more, by implementing better energy management practices.

After an initial questionnaire and interview, a team of students and engineers from the Georgia-North Florida IAC, thoroughly reviewed Lee Container’s utility bills. Then, they visited the plant and utilized equipment such as infrared cameras and probes, to collect data and assess the company’s operations and equipment.

A few weeks later, they provided the company with a comprehensive report including information about the current energy use at each production line, as well as other parts of the facility such as, warehousing and office areas. The report also included five Assessment Recommendations with estimated costs and payback periods. The recommendations ranged from simple investments in insulation to installation of a solar array, but all calculated a payback period of less than five years.

In the next year, the company plans to continue working on projects to improve the company based on the information gathered through the IAC report and their ongoing practice of MDI.

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