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5 S's spell efficiency

Groesbeck metalworkers use lean principles

Dan Centers grinds down welds on a commercial box at the **Metalworking Group** on Pippin Road. The factory has been streamlined and reorganized to increase productivity and cut costs. The company has seen a 50 percent increase in sales over the last year.

WHAT THE S'S STAND FOR

The basis for improvements under lean manufacturing techniques is a process of cleaning and organizing the workplace known as the 5 S's.

Here's what the S's stand for:

Sort: Remove unnecessary tools and items that aren't used regularly to gain space and improve visual organization.

Straighten: Arrange needed items, making it easier to find them when you need them.

Sweep: Clean the work area to improve quality and identify problems.

Standardize: Train everyone in the work area and establish minimum standards.

Sustain: The hardest task is maintaining the other four by making the changes part of the everyday routine through schedules and checklists.

Source: Edwin H. Colby Associates

GROESBECK - The Metalworking Group, a Groesbeck metal-stamping plant employing 100, produces about 800 different items regularly for dozens of different manufacturing customers.

Because the plant's work is so diverse, owner Mike Schmitt was skeptical that the so-called "lean" manufacturing, a process of streamlining and standardizing work processes, would work in his job shop on Pippin Road.

But after being introduced to the concepts popularized by Toyota through a customer, Liebel-Flarsheim Co., a Reading-maker of medical imaging equipment, and working with Edwin H. Colby Associates, a Fort Mitchell firm that specializes in implementing the techniques, Schmitt has become a believer.

"The idea that lean manufacturing won't work in a job shop is just false," said Schmitt. "Seventy to eighty percent of our processes are repeatable."

Last year, the Metalworking Group had revenues of \$16 million, up about 50 percent from a year ago, but it isn't standing still.

To stay competitive, the company brought in Colby Associates to teach employees how to implement lean techniques - basically a systematic approach of empowering workers to continually eliminate waste and improve productivity of their jobs.

"Mike Schmitt is smarter than the average guy because he knows what he doesn't know and he's willing to try something," said Bruce Cayes, managing partner at Colby.

Says Schmitt: "The message of the lean manufacturing journey is that you have to look at your operation and eliminate every bit of waste that you have."

The first step was implementing what's known as the "5 S's" - basically a process of cleaning, sorting, standardizing the work areas and sustaining the changes every day throughout the 76,000 square-foot plant.

Walking through the plant, Schmitt points out what used to be disorganized chaos with parts and tools scattered about but now is a clean and organized work area. Even the areas for trash cans are clearly marked on the floor.

"If you'd seen this area before we started, you would have thought, how does anybody get anything done back here," said Eddie Gray, 48, of Springfield Township who works in the plant's paint shop.

"It was dirty," he said. "We powder paint quite a bit so you have a lot of dust. We had a lot of trouble with parts having dirt on them when they came in for painting."

Now the paint area is organized with tool areas clearly marked. Workers are required to go through a checklist to clean their work areas at the end of each shift.

The next step of the lean process is organizing and streamlining work areas to eliminate unneeded steps. About two-thirds of the plant has gone through this process. Workers break down into teams and, armed with stopwatches and clipboards, they time and map out every step on a particular job, looking for ways to eliminate waste.

A faster metal box

One of the plant's most successful projects so far has cut the time it took to produce a 2-foot by 3-foot metal box for a customer from 90 minutes to 30 minutes by reorganizing the welding area.

"We used to grab parts which were scattered all over the building," said Josh Bradley, 21, a welder from Colerain Township. "We'd spend about 20 minutes looking for a part, then you'd take it to your welding booth and weld it up."

Sherry Decker, client service director for Colby, said an employee team spent about a half day learning how to gather data.

"They figured out how much space was needed and how much time the process should take," she said.

Says Bradley: "While we were (organizing the process) it seemed kind of rough. But now that we're actually doing it and producing a finished product, it's a killer."

With all the parts in easy reach, he says, the job is much easier.

"What we've tried to do is turn ownership of the product over to the guys in the shop," said Cayes.

Workers get organized

He said some managers assume that because an employee works in the shop he's not capable of organizing his work area or operating it more efficiently.

What they overlook, he said, "is at the end of the work day, those same workers go home and organize their children's soccer league or softball team, or they run a school PTA or other community activity."

The lesson for U.S. manufacturing, he said, is: "We have the most productive workers in the world but we're never going to beat the Chinese on labor rates. There will always be somebody with cheaper labor, so we've got to operate smarter."