

Lean Manufacturing



Fuels Recessionary Rebound

BY BRAD F. KUVIN, EDITOR

Talan Products' supervisor Frank Lowe grabs a tool off one of the firm's die carts designed as part of the firm's recent 5S and quick-die-change initiatives.

A manager can't pick up a business magazine or book that doesn't extol the virtues of lean manufacturing. The benefits—reduced costs, less scrap and improved customer service, to name a few—are well documented. But few small manufacturers are implementing “lean.” Maybe it seems like a big-company strategy requiring the hiring of consultants and additional training, and maybe it seems like it's just not for your company. After all, everybody talks about the Toyota Production System but is anybody telling us what assembling cars and stamping metal parts have in common? Or, maybe it's just the name of the concept itself. After all, you're probably pretty lean as it is.

Sound Familiar? Then Benchmark this Company

None of the above-mentioned issues were a problem for executives at metal-former Talan Products, Cleveland, OH, where CEO Steve Peplin, president Pete Accorti and VP of manufacturing Pat Parziale explained their recent success implementing lean strategies.

“We had been discussing a move

toward lean methods for several years,” says Peplin. “We've always had a participative work environment, so we thought we had the right culture. There wasn't much doubt in our minds that we could implement lean methods in our shop, but we also knew we needed help staying on track.”

Accorti adds, “We had actually made some small efforts to implement lean-manufacturing methods in the past. That experience told us that lean methods weren't rocket science, but that they do take a lot of discipline to sustain. And, we recognized that we needed somebody from the outside to educate us and help us keep our noses to the grindstone.”

For outside expertise, the firm contracted with Chagrin River Consulting, also in Cleveland, bringing in Rick Bohan to help with implementation. “The first thing Rick did,” says Accorti, “was spend a few days in the shop getting to know our people and operations. After that, we scheduled a series of planning sessions for the senior leadership, to set some targets and develop an action plan for rolling lean methods out across the shop.”

Planning Key to Getting Everyone on the Same Page

No lean-implementation project can be successful without careful planning, which Talan's management undertook only after allowing Bohan to interview managers and employees about Talan's operations. Says Parziale, reporting on early management planning sessions: “Our discussions showed that we had some differing views around the shop regarding prioritizing our efforts, but we were able to agree on what was important and what we should be working on. I think that helped management present a united team to the rest of the company and see that we were serious about this project and committed to it.”

Metrics a Must, Starting with 5S

The leadership team developed a set of measures used throughout the project to gauge performance improvement. Among the metrics: inventory turn-around, measures of equipment, tooling, and personnel availability, scrap and direct labor efficiency.

“The work we did developing and refining our metrics optimized the

effectiveness of the lean implementation,” says Accorti. “Some of our most energetic discussions as a leadership team involved metrics. These discussions helped us understand that lean manufacturing isn’t just applying some tools to the shop floor and hoping for the best.”

The leadership team committed to posting, every month, easy-to-read charts to track the metrics. In addition, the team still meets to discuss progress on the metrics at the start of each month.

“The charts drive a lot of energy and action,” says Peplin. “They help us identify problems and opportunities early rather than when it’s too late to solve or take advantage of them.”

During the planning sessions, the senior leaders also developed a 12-month calendar of activities for the lean implementation. The team’s decisions were based on their own knowledge of what was needed in the plant coupled with the results of the consul-

tant’s report. First, a series of 5S action workshops were scheduled; each press was to have its own 5S workshop. The workshops addressed two objectives: teach supervisors and operators the principles of 5S, and actually get the presses and the areas surrounding them organized.

Workplace Flow and Organization

The 5S tool addresses workplace flow and organization, focused on sorting, straightening, shining, standardizing and sustaining. More than a house-keeping program, 5S initiatives address a variety of important factors including workplace safety, material and information flow, preventive maintenance, standardized work instructions, inventory control and purchasing procedures.

“We were very interested in starting with 5S,” explains Parziale, “to get everyone involved, develop a teamwork approach and make a visible difference. The 5S workshops were a good start to

the overall initiative.”

The 5S workshops highlighted the importance of preventive maintenance on presses and auxiliary equipment. They also focused on the importance of organizing and standardizing die-change tooling. For example, the 5S teams put into use a series of die carts, and also color-coded clamps and other tooling.

“We also found that we had to audit weekly to keep the 5S program energized,” adds Parziale.

Creating a Visual Factory

The 5S workshops introduced visual factory methods at Talan Products. For example, operators were expected to record oil pressures each hour. In doing so, many stated that the gauges were too small and were located such that they were hard to read. As a result of 5S, the firm invested in larger gauges that were relocated so that they became easier to see and read. Operator compliance with the task of recording hourly pressures

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increased.

In yet another example of developing a visual factory, large charts were posted at each press so that operators can easily record, hour by hour, production statistics. The charts also provide space to write comments and problems. And, not to be overlooked, the charts were designed to be clearly seen at a distance. Checking the charts throughout the day, supervisors and managers can see how each operator is doing and quickly identify any problem areas. "The charts have helped us identify and address operating problems much more quickly than we did in the past," admits Parziale.

Talan also applied 5S methods to administrative practices. Says Accorti, "While I initially believed that the administrative 5S might be superficial, we were able to standardize and better organize customer files. We also developed standards for keeping our shared drives organized so staffers didn't spend as much time looking for what they needed. I think some of us originally thought that 5S would be mostly a housekeeping exercise, but it's really about creating an overall environment where work becomes easier and less frustrating. As a result, delays and errors have dwindled."

Next Up: Quick-Change Workshops

Quick-die change (QDC) is another important lean tool, focusing on reducing eliminating delays and errors. Talan worked to reduce changeover times not by admonishing operators to work faster, but by asking for and implementing their ideas to simplify changeovers.

"We received good feedback after each of our QDC workshops," reports Peplin, "which were all very hands-on and participative." Parziale agrees: "The workshops didn't just cover theoretical principles where we just hoped that our operators and supervisors

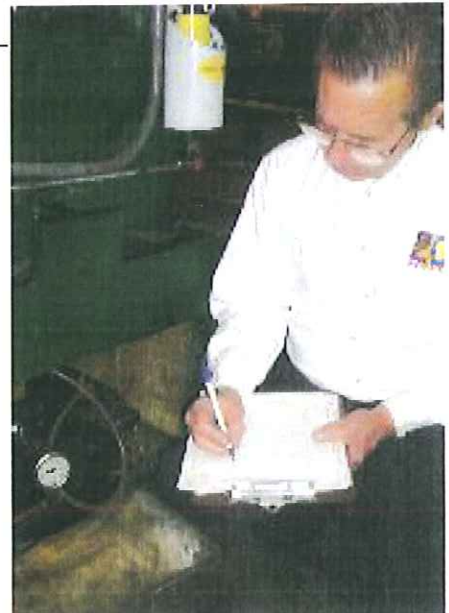
would apply them at some point. Instead, they actually went to the presses and conducted die changes, returned to the conference room to discuss ideas for improving the procedures, and then went back out to the floor to try them out.

"Being successful at lean is all about engaging the operators," continues Parziale. "And the workshops went a long way toward accomplishing that."

The QDC workshops illustrated the importance of coordinating activities between several departments within Talan Products. In the end, the company found that actually changing dies didn't take a lot of time, particularly after implementing 5S activities and organizing die-change carts. Instead, big reductions in changeover time came thanks to coordination among production, tooling and quality control.

Last but Not Least—Value-Stream Mapping

With 5S and QDC initiatives successfully under its belt, Talan Products' management team then set its sights toward value-stream mapping (VSM)—creating a process flow map that it can use to highlight and contrast value-added and non-value-added steps. Parts sitting on the shop floor awaiting material handling is a nonvalue-added step, as is waiting for a die to become avail-



Talan's Gene Sawyer takes an hourly reading from a press's oil-pressure gauge. As part of the firm's directive to implement a "visual factory," it replaced its previous gauges with larger gauges, and repositioned them to allow easier and more accurate readings.

able. Following a brief introductory lesson on VSM, the firm's steering committee chose a target product and selected a VSM team, which included Accorti.

"We had completed similar exercises in the past," says Accorti, explaining why the company didn't begin its lean journey by developing a value-stream map, as some consultants suggest. "We were pretty confident that we knew where our opportunities for improvement were, so we started on those—5S and QDC. Then we started the VSM process, to identify other opportunities to improve."

The VSM team, facilitated by Bohan, met weekly to gather information and develop a map for one of Talan's highest contribution products. Says Bohan, "We happily found that raw-material and finished-product inventory turns for that product were very high and that nonvalue-added time was being controlled, showing that the company had paid close attention to good flow."

Concludes Peplin, "Since committing to implementing lean initiatives, we've seen all of the metrics we decided to focus on head in the right direction. I'm convinced we're rebounding from the recession more quickly than we would have thanks to our commitment to lean manufacturing." MF



Supervisor Miguel Lugo (left) and press operator Mark Adams discuss Mark's real-time hour-by-hour performance as marked on the chart. Hourly, Mark notes on the chart any problems he might be experiencing and supervisors review the charts and collaborate with the operators to solve the problems.