

The Gemstone

Newsletter

June 2006



Lean Strategy



For A Robust Commitment

Lean Strategy

The Lean Strategy at The Gem City Engineering Co. (GCE) is to continuously monitor, review, and modify our manufacturing and management processes and methods to give our customers the best advantage of our skills and equipment. This is a win-win strategy in that the benefits to our customers of quick turns and lower costs result in identical benefits for GCE.

Lean Focus: Machining Division

The Machining Division (MD) has been a target for our lean strategy initiatives from the beginning of our transition from a traditional manufacturing environment. We “lean” heavily on the knowledge and skills of all of our employees. Teams are formed to attack a problem from multiple outlooks and multiple skill sets. We began with a single project . . . a Kaizan (continuous improvement) event . . . in the mid-1990s, where we scrutinized an underused facility that had some unused and partially obsolete machinery.

No More “One Operator Per Machine”

The first GCE Kaizan event approached a work environment that had long held a one-operator-per-machine mentality. This was a machine operator that had to do set-ups with whatever tooling and fixturing that was available. We came away from that experience knowing that there was a lot we could change

and a lot we could improve. In the years since, we have grouped machinery in cells, with a single operator running two or more pieces of equipment and all of the tooling and fixturing readily available within each cell.

Programming The Machines

No matter what your machining capabilities are, CNC machines must be programmed for every job they run. The next point of attack was to get the CNC programs from the programmers to the machine controller, quicker.



The Gem City Engineering Co.



This is now accomplished by taking soft copy engineering data and turning it directly into a CNC program. The program is then loaded directly into the machine controller, which saves a tremendous amount of non-productive operator and machine time. As a result, CNC programmers have become significantly more productive.

Active Participation

GCE has always “enabled” employees at all levels



to provide input on their jobs, their active participation was encouraged and expected. An integral part of our lean initiatives is to promote active participation . . . up, down, and sideways: management and cell leaders have white board meetings each

morning to identify and deal with potential problems; evaluate suggestions; and devise and implement solutions . . . on a real-time basis. Our employees know our business and how their jobs fit our commitment to our customers. We rely heavily on these experts throughout GCE.

Sell Off Dead Weight

Over time, we sold off all older equipment and consolidated the MD in a single building. Cells of machines were established, wasted motions were eliminated, and travel time



between machines and between cells was reduced to bare minimums. However, unlike a garage sale, we did not use our newfound space and productivity to make room for more old equipment and old ideas.

Modern Tools and Emerging Productivity

As a result of the new thinking in the MD and the new look to facilities, GCE opted to focus

on those technologies and services where we are truly superior. Our machine utilization rate is over 85%. We have machining

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Bill Hey
Director of Manufacturing

centers that run nearly 24 hours per day, every day of the week. New machine tools are evaluated and purchased based on their flexibility and overall productivity. Single machines now do the work of several; setup may be only minutes and once the program is turned on, it may be a day or more before it needs to be touched again. Automatic tool changers and automatic machine-to-machine transfers allow an operator to be efficiently responsible for the operation and output of several

machines. And to allow us to remain focused on our profitable skills and capabilities, we routinely use a network of equally skilled niche machining suppliers to augment our requirements.

On Demand

To help assure our vendors' continuing success, we work with them to develop their own lean strategies. We understand that our business is tied directly to their businesses. We



know what the lean philosophy has done for our business plan. We want them to share in our present and future success.

Lean Focus: ReModeling For The Present and The Future

While GCE certainly did not invent the concept of lean manufacturing, we use it daily to our advantage. We have been able to leverage the experience of others and have been able to implement the tactics that fit our business model. According to Bill Hey, GCE Director of Manufacturing, “Lean thinking is pervasive at GCE; it drives all aspects of our business. We train to recognize lean opportunities; we measure options based on lean fit; we implement lean decisions knowing that we will change again when it is the right thing to do.”

We are committed to stay focused and to continuously monitor, review, and modify our manufacturing and management processes and methods to give our customers the best advantage of our skills and equipment.



Please visit our website at www.gemcity.com and contact us at sales@gemcity.com.