

# 1 Dollar Week for One Manufacturing Plant

arch, a plastics manufacturer in Henderson, Kentucky hosted week-long Lean Systems Bootcamp facilitated by KAMer, Institute for Lean Systems (ILS). The company had recently been purchased and partially consolidated by the new owner who were intent on returning this struggling manufacturing operation to profitability.

A group of 22 people, mostly managers from other companies in the new owner's portfolio, met on March 2 not really knowing what to expect for the week. They had been told that they would be attending a training course with a heavy hands-on component. When they arrived, Parthi Damodaraswamy, ILS's Director of Operational Excellence, divided them into four teams for introductory training on lean thinking, focusing on 5S and visual controls, basic problem solving, waste, and flow, then sending them to the manufacturing floor to identify problems. [5S is a lean tool for understanding the work done in a particular area, then removing anything there that is not essential to the work, organizing everything that is essential for quick access, cleaning the work area so everything is more visible, documenting the standard for the workstation, and sticking to the standard.]

Teams returned after a couple of hours with a long list of problems which they grouped into nine projects. All nine projects were completed over the next four days.

For projects that required more specific training, Parthi presented new information and lead discussions and activities to maximize learning. Through the week, the groups learned about motion economy and ergonomics, pull systems with a variety of signal control mechanisms (called kanbans), standardized work analysis and documentation, time study methods, and process mapping and analysis. After the discussion of each concept, they went to the floor and put it into practice through their projects.

Some projects optimized the process flow of several machine centers so they required fewer operators to fully satisfy customer demand. Another did the same for the warehouse. All told, 19 positions were identified as excess. After eliminating overtime, reassigning some part-time and temporary workers, and reassigning some others, the company was able to reach this target without laying off a single full-time employee. Only one of the projects required a capital investment (\$4,000), but the savings realized by the end of the week totaled \$665,000!

Optimization of flow also made it possible to control contaminants reaching the product resulting in significant quality improvements, saving scrap and rework valued at \$31,753 annually. New pull systems implemented during the week enabled the company to operate with less inventory and still get the product to the customer more reliably, saving another \$195,000. The freed-up space allowed the company to stop using certain handling equipment they were leasing for \$12,000 annually. They freed up floor space to eliminate the need for outside storage, for which they were paying \$13,200 annually. The another project eliminated the need for stretch-wrapping at one warehouse operation that would save \$9,000 in consumable materials every year.

Management engaged all employees during the planning and implementation of all of these projects and everyone realized that it was a successful week, the plant was likely to close down for good, costing all the jobs there. Everyone pulled together, identified barriers, and managed to overcome most of them. At the end of the week, the total savings amounted to \$920,000. They are not out of the woods yet, as this segment of the economy is still hurting, but with their new learning, they can now face challenges more confidently.