

No “Downtime” with Lean at Dynamic Molding Technologies



Background

Dynamic Molding Technologies (Dymotek), formerly known as TRUEBRO, provides thermoplastic and silicone and injection molding solutions to the commercial building, automotive, medical, plumbing and food and beverage sections in 21 countries. Dymotek is one of the few companies in the United States to utilize two-shot silicone molding, which maintains the characteristics of the silicone rubber and thermoplastic resins when producing multi-material products. Dymotek employs 40 people at its facility in Ellington, Connecticut.

Situation

Before the silicone industry experienced the economic downturn, nearly 50 percent of Dymotek’s business, composed largely of very specialized automotive component production, was lost to off-shore outsourcing or the utilization of in-house suppliers. Unfortunately, Dymotek lost additional business as the recession took hold. However, the company had a long term strategy in place that guided them through the downturn. Dymotek regained a portion of the automotive business and gained considerable new business, mostly in the devices relating to disposable fluid and air valves, and pumps in the food and beverage dispensing section. With the changing business mix, the company’s warehouse became unorganized; storage was random, unidentified and haphazard. As Dymotek prepared to address their warehouse inefficiencies, they turned to CONNSTEP to design a new warehouse layout to support the flow of product to and from manufacturing while detailing inventory, storage, usage and logistics.

Solution

After an initial discussion with CONNSTEP, the company put the warehouse layout project on hold and decided

Results for Dymotek:

- Retained \$4M in sales
- Realized \$100,000 in cost savings
- Created 10 new jobs
- Retained 12 jobs



While our initial benefits from Lean have made a very positive impact for the company, we know that continuous improvement means continuous thanks to the NU Prime Program and CONNSTEP. We’ve received expert facilitation and guidance, allowing us to build a good foundation with Lean practices.

Norm Forest
Executive Vice President and General Manager
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to focus on two of Dymotek's production cells -- the Mini Vent and the Lavatory Guard product lines. With CONNSTEP's guidance, the company decided to embark on Lean training and Value Stream Mapping (VSM) to improve production capacity. The Lavatory Guard product cell experienced slow process time, operator travel was in excess of three miles per shift requiring multiple operators, and the product did not flow through the pack-out process. CONNSTEP worked with Dymotek to develop standardized operator processes and implement 5S (Sort, Set-in-Order, Shine, Standardize, Sustain) Workplace Organization, Kanban systems, and cellular layout. By balancing the flow and a new cell layout, operator travel was reduced, along with the elimination of three packing steps. With the change, one operator can now run the line with 100 percent uptime. The improvement has helped Dymotek maintain a consistent price point for the Lavatory Guard product line. Next, CONNSTEP helped the company with the Mini Vent product line. This item has 34 part number combinations which led to excessive operator travel for boxes and component retrieval, unknown replenishment times, and a changeover time of one hour and 40 minutes. Similar to the Lavatory Guard project, standardized operator processes were developed with the implementation of 5S, Kanban systems, and cellular layout.

Upon project completion, specific standardized layout practices were developed for each part number, work instructions were clearly defined, and a pre-kit process was developed. These changes led to reduced operator travel of one mile per shift and a reduction in changeover time to 22 minutes, down from one hour and 40 minutes. Through implementing Lean methodologies on the Lavatory Guard and Mini-Vent lines, Dymotek was able to fill the generated capacity. With the success of two Kaizen events, the warehouse project moved to the forefront. The layout design took a logical approach with consideration of Dymotek's core competencies. The first initiative was to rearrange the warehouse and establish a logical flow of raw materials and finished goods so that the closest storage space to the manufacturing floor now houses the fastest moving products and raw material, with the slowest moving products relocated to the rear and upper reaches of the space. After establishing flow in support of manufacturing, Kanban signals were developed and entered into Dymotek's Enterprise Resource Planning system. The system is fully integrated and bi-directional allowing customers to check on the status of current products, quantity on hand, and work in process. Having a handle on customer needs allows Dymotek to produce to minimum inventory levels, reducing the cost of on-hand inventory.



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CONNSTEP, Inc. is a consulting firm strategically helping companies in Connecticut to grow their businesses and improve operational methodologies, leading to increased profitability, improved efficiencies, and creating sustainable competitive advantages in the marketplace.

