

Case Study: Ehmke Manufacturing Company
Production Floor - Value Stream
Mapping Production Line #104A

Customer: Defense Supply Center Philadelphia
(DSCP)

Services: Improve productivity and reduce
product lead-time

Commencement: January, 2008



Executive Summary

Production Line #104A did not meet our customer's requirement of producing 100 sets per week. Each set of products consisted of four items: one (1) carrying case, one (1) belt harness and two (2) straps. The challenge was to balance the cellular production line to produce the desired output with three (3) operators. A "current state" value stream map was developed and analyzed. The current state showed 5 operators producing approximately 65-72 sets per week. Our internal, cross-functional LEAN team developed goals to balance the production line, "5S" the area, and develop a Communication Board to visually convey all pertinent information. Each team was comprised of sewing machine operators, quality personnel, design engineers, plant operations and two (2) outside manufacturing partners.

Scope of Work

The scope of work covered four (4) primary goals:

1. 5S (sort, set in order, shine, standardize and sustain) area
2. Design a Communication Board
3. Develop a Kanban or bin system for work in-process (WIP)
4. Set-up cellular flow to meet customer's requirement of 25 sets per day utilizing three (3) operators.

To accomplish these goals, the LEAN Team proposed to spend less than \$100 to purchase color coded bins, tape and supplies

Findings

1. The LEAN Team successfully completed three (3) of the 5S initiatives - sort, set in order and shine. In addition, Point of Use inventory locations were strategically placed throughout the cellular line to eliminate wasted time and movement. Standardizing the work stations and, subsequently, sustaining the gains have not been completely successful to date. Additional operator cross-training, improvement to employee communication and consistent raw material supply will be required to meet the team's goal.



Case Study: Ehmke Manufacturing Company
Production Floor - Value Stream
Mapping Production Line #104A

Customer: Defense Supply Center Philadelphia
(DSCP)

Services: Improve productivity and reduce
product lead-time

Commencement: January, 2008



2. The Communication Board has been developed and the company will begin converting all existing boards throughout the shop floor to meet this standard.
3. A color coded bin system has been implemented to help move towards one piece flow to eliminate overproduction and/or out-of-stock conditions.
4. Currently, three (3) operators have produced, on average, 23 sets per day. Once the production team receives the necessary cross training and the company's supply chain management eliminates the material shortages, the cellular line should meet or exceed the requirement of 25 sets per week.

Value Added

The anticipated "future state" output of 25 sets per week (utilizing three (3) operators instead of the "current state" five (5) operators) will save the company approximately \$960 per week in production costs. The Communication Board visual design will be used throughout the shop floor to eliminate wasted time in transmitting information and reduce errors.

Continuous Improvement Opportunities

1. The LEAN Team needs to fully implement "standardization" throughout the cellular line and sustain the process.
2. Cross-train operators to improve skills on all types of sewing machines.
3. Demonstrate to operators that by working as a team, they can exceed their expectations and maximize their earning potential.
4. Establish a sustainable source of raw material supplies.
5. Communicate, communicate, communicate.

