CASE STUDY

Six Sigma Approach Cuts Defect Costs by $800K Yearly

PROJECT BACKGROUND

A century-old consumer brand leader in surfacing materials was seriously concerned about rising defect and scrap rates at its Midwest plant. Although the company had an internal team focused on various scrap reduction initiatives, the scrap rates continued at elevated levels.

To aid in finding root causes for permanent relief, the company engaged Integrated Project Management Company, Inc. (IPM), with which it had prior success.

IPM'S SOLUTION

IPM initiated two projects to reduce manufacturing defects: the first focusing on personnel and methods, and the other focusing on equipment failures that were directly causing breakage. IPM determined that using Six Sigma DMAIC (define, measure, analyze, improve, and control) methodology would help identify root causes of the breakage problem, develop improvement strategies, implement improvements, and track success.

IPM worked with the company's cross-functional project team to establish a mutual definition of "defect" so the various staff involved could align their focus on a common problem.

Next, IPM studied current manufacturing operations to establish a baseline for improvement. IPM interviewed unit managers, engineers, shop floor personnel, and operators involved in production and observed equipment capacity, speed, and function.

From these examinations, IPM created a process map, which visually represented production workflows and interrelationships between each step in manufacturing. The process map enabled the team, for the first time, to truly visualize the details of the entire production process and helped reveal what was causing the defects.

After careful analysis, IPM led the team in determining that machine-related breakage, improper workstation layout, and operator mishandling were the predominant causes of defects. The team recommended that new equipment be installed and existing equipment be realigned to avoid chipping the product. The company also initiated a program to retrain employees in handling procedures identified as problem areas, such as manual transfer of material and forklift operations.

Throughout, IPM integrated Six Sigma methodology with project management best practices to keep the effort on schedule and on budget.

PROJECT RESULTS

Within IPM's 14-week engagement, and through the implementation of new material-handling procedures and installation of the new and modified equipment, monthly product breakage was reduced to create an immediate annualized savings of $800,000.

Other efficiencies created through this project include:

- Staff are now routinely trained on optimum material-handling procedures.
- Because process mapping made the entire production process transparent, employees were able to identify additional efficiencies, including flagging or removing damaged product from the production lines.
- While improving operations, the company established ergonomically sound approaches to handling equipment and products.

IPM INTEGRATED® PROJECT MANAGEMENT
200 South Frontage Road, Suite 220
Burr Ridge, IL 60527
T 630.789.8600
F 630.789.7945
www.ipmcinc.com