

A COMPANY LASER-FOCUSED ON ZERO DEFECTS

ABOUT HILITE INTERNATIONAL. Hilite International is an automotive supply chain manufacturer specializing in the development and production of systems and components to improve fuel consumption and reduce emissions. Based in Germany, the company offers its expertise on progressive engine and transmission technology to OEMs and other customers in the automotive industry. Hilite employs 1,400 people across eight locations in Europe, North America, and Asia, and has around 250 employees at its manufacturing facility in Whitehall, Michigan.

THE CHALLENGE. Hilite is laser-focused on quality and efficiency, with a goal of zero defects throughout the production process. However, while Lean management tends to concentrate on eliminating waste and ensuring efficiency, Hilite wanted to get the product right the first time. Rather than spending extra time and money to rework defective parts, they wanted to eliminate defects all together. The company already supports a Lean environment by monitoring the 8 Wastes of Manufacturing, implementing a 7S philosophy, and minimizing stock and resources with Just in Time Production and Kanban systems. The challenge was how to go even further. How could Hilite achieve their “zero defect” goal?

MEP CENTER'S ROLE. After meeting with Hilite professionals and listening to their goals, the experts at Michigan Manufacturing Technology Center-West (MMTC), a NIST MEP affiliate, landed on the solution: Six Sigma. The central idea behind Six Sigma is to measure how many defects are in a process, then systematically determine how to eliminate them, getting as close to “zero defects” as possible. Over a 14-week period, members of the company’s supervisory, engineering, quality and training departments participated in Lean Six Sigma Green Belt Certification. Using the first three Six Sigma tools (Define, Measure, and Analyze), the team worked to identify and understand the root cause of a problem on the company's primary production line. Using the DMAIC tool, the team defined the problem and measured the loss. The company implemented new systems and standardized the process, completely resolving the issue through continued monitoring. Hilite achieved its goal, saving money on the cost of defects and improving product quality and safety measures throughout the plant. To encourage zero defects across all areas of the production floor, the team created the “Quality Challenge” reward system in an effort to stop defective products from reaching controlled shipping inspection and, ultimately, the customer.

"We feel now that our systems are truly complementing each other. We are on our way to being more efficient and effective in executing our processes to not only meet our customers' expectations, but surpass them."

-Colin Eden, Manufacturing Improvement Group Leader

RESULTS



Cost savings of **\$205,365**



Safety incidents down **50%** below target



Associates more engaged in their 7S initiatives



Achieved goal of **0** defects



First-time quality at 99%, **1%** higher than goal

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