

Empowered Performance

Teaching and Old Dog New Habits

How one company saved 120 hours a month through set-up reduction planning

Abstract

Time changes all things, and business is no exception. For manufacturing firms, adapting to change can be costly. Equipment is expensive and often there is a difficult choice between specialty machines that do a limited set of functions well, and less efficient but more flexible multi-function machines. Even under the best circumstances, the “right choice” is valid only for the current moment.

For a leading paper converting company, they faced a massive change in their industry. New communication technologies had made the use of paper envelopes appear relics of a bygone era. With the core of its business a fraction of what it had been, the company was in process of remaking itself as a supplier of more customized products. But they were still running it on the old equipment, and with profits down, there were no resources available for new capital expenditures.

The Challenge

The company was facing a shift from large, infrequent orders to smaller, more frequent orders with greatly reduced lead-times. This situation was especially challenging since most of their equipment built to handle large orders with minimal changes. Further complicating matters was a reduction in the pool of skilled labor. Over 50% of the set up personnel had less than six months experience, and there was no

formal training program or process documentation. All of these factors had negative impacts on quality and customers were losing faith in the company’s ability to provide high quality products in a timely manner.

How We Helped

Empowered Performance was brought in to address issues on the shop floor, specifically setup reduction and machine throughput. Changeover and throughput were obvious areas that needed improvement, however, finding the time to make improvements was the biggest challenge. Trying to get the team to analyze what was happening so they could focus on actual issues and implement improvements was difficult at best. It was a case of being too busy chopping wood to sharpen the axe.

The establishment of reliable measurement criteria that effectively tracked and monitored the setup process increased the visibility of the problem. By enlisting the setup personnel in monitoring the actual process, trends began to emerge and among these, three key trends stood out: Set ups always took longer than anticipated, There were large variations depending on who was doing the work, and There was no consistency in how the machine was set up.

“Setup times reduced by 95 minutes on average, a savings of almost 120 hours per month at the test location.”

The Solution

Empowered Performance focused on set up time reduction and documentation as one of the key projects to help achieve the needed improvements. A two day workshop was conducted with a cross-functional team of associates focusing on the current situation and training on Single Minute Exchange of Die (SMED) principles to improve the process. As part of the training, a complete set up was videotaped and reviewed with the objective of reducing the amount of time to execute, breaking down all steps into the following categories: Waste – those items to be eliminated or, at minimum, greatly reduced
External Process – those items that can be preset while the equipment is still running.
Internal Process – those items that can only be done while the machine is shut down

Due to the complexity of the equipment, Empowered Performance recommended a pit stop approach with 4 set up people each working on a single section of the equipment to minimize the down time. Training was established to standardize the setup process across all setup personnel allowing the experts, the ones doing the work, to collaborate on the most effective methods. As improvements were made, the process was revised and subsequent training on the improved method was completed.

The Result

Empowered Performance was able to help the company see measured ROI of over 600% by significantly reducing setup time and training time for new employees. Setup times reduced by 95 minutes on average, a savings of almost 120 hours per month at the test location. Rolling these same changes across their other locations, the company was able to achieve similar results. The process also allowed them to establish standard training materials, reducing new employee training.

For more information

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