



**STD Med: 2 days, 350 hours---  
How a Short Set-Up Reduction Pilot  
Demonstrated Huge Opportunities in Machining**

STD Med, Inc. is a rapidly growing and emerging leader in the development and manufacture of medical devices and precision machined components. Established in 1953, STD Med, Inc. is a privately held company located in Stoughton and W. Bridgewater, Massachusetts.

As a contract manufacturer, STD provides comprehensive outsourcing solutions to the medical device market, including OEM product distribution services, engineering services, precision component production, finished goods assembly, refurbishment of medical devices, reusable surgical kit management and complete supply chain management.

Recently STD started working with Bob Elliott, GBMP Continuous Improvement Manager, to apply lean thinking and methods in the machining side of the business. This part of the business is machine-intensive and produces a wide variety of precision parts each day based on customer-supplied prints and in-house engineering project needs. Set-ups/changeovers are a big part of the daily work in this area.

Using funding from a Massachusetts workforce training grant, STD asked Bob to provide training and practice in the principles and techniques of set-up reduction for a team of employees. The goal of this hands-on effort was to demonstrate, through a small pilot effort, how changeover times can be significantly reduced at STD when people are able to see waste and apply their creativity to the process of set-up. The Quest machining center, a machine with long set-up times and frequent changeovers, was chosen for the pilot effort. After some brief classroom training to introduce the cross functional team members to set-up reduction, the group went to the floor and filmed a typical changeover on the Quest. The changeover was completed in 118 minutes. Everyone agreed that prior to their training this time would have seemed pretty good since it was just under the allotted time of 120 minutes on the job traveler. But now their eyes were open.....

With coaching from Bob, the team conducted a detailed analysis of the set-up operation. "Using the video tape to see and measure the times of each of the sub-steps within the process was really helpful for the team", noted Bob. "It allowed them to really understand the difference between internal (changeover steps done while the machine is stopped) and external (changeover activities done while the machine is still running a job) changeover activities. They could easily see that many things currently being done internally, or when the machine was stopped, could be done externally, while the Quest was running the prior or subsequent job."

After reviewing the film, several different improvement opportunities were suggested and discussed. Bob challenged the team to develop these ideas so they could be piloted and tested during the second training day that was planned a few weeks hence. According to Bob, "This group did a great job preparing for the second class. They had the machine ready to set up the same job we did 4 weeks ago; they had point of use tooling in place, had built set up carts, dedicated tool holders, improved documentation, and basically all the ideas we talked about were ready to go. The initial set up was 118 minutes and with the improvements they made, they brought the time down to 33 minutes in the second taping! This represents a 72% improvement, well above the 50% reduction we challenge teams to make on their first round of set-up reduction. It was really a great job by the team, and I think the wheels were really turning about what this could mean to the entire STD machine shop if set-up reduction efforts are applied to all machines."

One member of the team, STD's CI Manager, Dan Massucco, took the time to do the math on the team's pilot and was pleased to report "based on work that goes across the Quest work center, this team has potentially freed up 356 hours per year with these improvements! We can use this time to set-up and run more jobs and become more flexible in how we serve customers of the Quest."

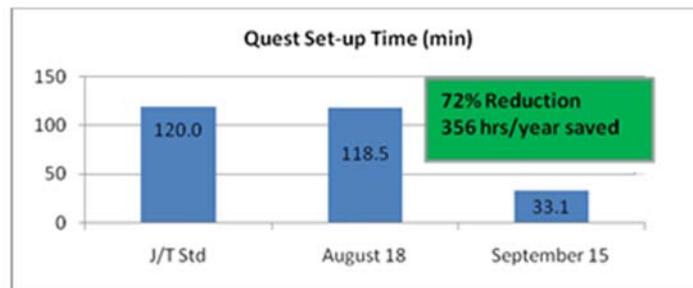
This focused pilot project generated excitement among the team members and gave them the thinking and tools needed to keep driving down changeover time at STD. Now to apply this same thinking to ALL machines in their machine shop....everyday!



The Quest CNC Machine



Trying out a set-up cart



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