Automation

straight talk

by Jerry Koskovich, P.E.

Expectations: What You See Isn't Near What You Get

Learn about the "fringe" benefits of automation!

When the conversation turns to automation, many people have preconceived ideas as to what it is and what it can do for them. Certainly the primary expectation is that it will increase their profits. Visions of accomplishing certain production tasks at astoundingly fast rates while requiring fewer employees to make it happen usually come to mind.

While achieving greater production with lower labor costs are reasonable expectations, they are only a few of the benefits that can accrue as a result of automation. Some of these "fringe" automation benefits are more subtle—but no less important.

Automated Unhooking

Imagine that you're considering replacing your truss plant's manual component saw with a new automated component saw. Currently, you're greatly dependent on your skilled sawyer for the accuracy and through-put flowing from your manual saw. A good sawyer is like money in the bank. Your sawyer, after all, has learned the nuances of the manual machine in order to process components with a reasonable degree of accuracy. He knows that angles or lengths need to be cheated this way or that on the protractors or scales in order to achieve the correct result. This knowledge is what makes him valuable and, in many instances, nearly irreplaceable.

The problem is that good sawyers are hard to come by and, in the worst of cases, can be downright independent. I can't recall how many times I've had plant managers and owners tell me about problems they've had with non-dependable sawyers, due to issues ranging from temperament, alcoholism, or drug abuse. But in many cases, their sawyers were so necessary, so critical to a component saw's production, that these employers were compelled to keep them on board. These issues present the impetus to automate, as one of the benefits of an automated saw is that you will no longer need a highly skilled sawyer. A properly maintained automated saw will process components at tolerances far better than had been the standard prior to their introduction. And, while an intimate knowledge of the automated machine can be advantageous, it's not necessary.

Indeed, your experienced sawyer may not be the right person for your new automated saw. They often have preconceived ideas about what the automated saw should do and how it should do it. Years ago, while on an installation of a new component saw, a sawyer that operated the plant's remaining manual saw kept coming over and confronting me with things he could do on his manual saw that couldn't be done on the new one. Tiring of this, I went over to his machine and stood there in silence staring at his manual pride and joy. Finally he walked over and asked, "What are you looking at?" "I'm waiting to see it do an automated set-up!" was my reply.

My point is...attitude is everything when introducing any new concept or technology.

at a glance

- ❑ A user-friendly automated saw requires a willing learner to handle its operator-dependent functions.
- ❑ Most automated saws today have some form of production reporting, including a comprehensive picture of everything that is going on at the machine.

If you have someone who isn't buying into the new automated machine, give someone else a try. Typically, there are eager beavers in the plant who will jump at the chance to try something new. A user-friendly automated saw will require nothing more than a willing learner to quickly handle the various operator-dependent functions of the machine. He will produce, and likely do so at rates well above what could be achieved on a manual saw by even the most experienced sawyer.

But let's insert a "sharp" operator in the same circumstance. The sharp operator is always thinking of ways he can improve his performance. He's always racing against another sawyer or, at the very least, against his numbers from the day before. He'll be paying attention to how the saw is performing—is something setting up slower than it did yesterday? Does the machine need attention beyond the daily maintenance he performs? He's a proponent of preventive maintenance rather than the benefactor of "free time" when something goes down on the saw. He's the eyes and ears of the maintenance department. **Get the sharpest operator with the best attitude....he'll be worth the extra dollars.**

Automated Incentives

Most automated saws today have some form of production reporting. In reports generated on all of our wood processing systems, you get a comprehensive picture of everything that is going on at the machine. The saws automatically monitor and report set-up times and other performance measures, through-put rates, and even non-productive delays that are controlled by the operator. They provide great insight as to where any bottlenecks might be forming.

One of our customers that had never used these reports in all the years they'd owned one of our automated component saws (they were my fourth customer in 1988) finally began using them a few years ago. Then they promptly established an incentive plan that awarded an increase in operator pay proportionate to the percent of production above the benchmark (our reports establish a benchmark of 100 percent for the various functions that relate to the performance of the saw, material handling, and the operator). If the numbers were below the benchmark, the dollars on the paycheck were proportionately less. Results have been outstanding!

This plant has found that production is consistently above the benchmark and is significantly higher than the saw crews had done as the norm for years prior to establishing the program. A fringe benefit was that the saw received better preventative maintenance (PM) since, obviously, if it went down so did operator paychecks.

Other Automated Benefits

For the most part, all of the aforementioned has related to the conditions and circumstances attributable to the saw and its operator at the cutting workstation. But there are many other attributes that can affect the company as a whole. Let's take the case where the shop may not be able to keep up with demand. Lead times begin to become unacceptable to customers, workers are stressed to keep up with the demands of management, and additional labor may not be readily available. All of the preceding can contribute to a less-than-ideal work environment.

Many times the best answer to such problems and conditions would be to automate where it will do the most good. But there are points to consider as you approach this major step. The purchase of a new automated machine could give plant employees the impression that the company is trying to eliminate workers. I've always promoted the belief that automation is a means to enable employees to produce more with less effort—and, in a safer environment. When making a presentation to employees, especially in union shops, you'll want to establish the notion that the company is willing to go the extra mile to improve the product it sells while improving conditions, circumstances, and often safety for the workers.

With automated cutting, the task of building trusses or walls becomes easier. Speed, accuracy, and ink jet marked components increases overall production. Not only will the components be processed more efficiently at the saw, but production at the build tables is typically improved by ten to twenty percent simply because of the improved accuracy. The product has a better appearance, panel points on trusses look like they grew together, and there is a perception, founded in reality, of improved quality. And, because there aren't any problems with cut parts being delivered for assembly (no re-cuts, mis-cuts, or forgot-to-cuts), there isn't near the finger-pointing and irritation between employees. In addition, deliveries will likely get back on track, day-to-day attitudes and the whole of the work environment will likely be much improved.

With all of the preceding there exists the very real possibility of greater demand for the company's products. With increasing demand comes the benefit of greater job security and perhaps best of all, the feeling of pride managers and workers have when employed by a growing, progressive and respected company.

Automated Downsides

There are downsides to automation as well: the biggest one is that you must be willing to look at your operation differently and make significant adjustments throughout your plant. You can't simply increase cutting efficiency by multiples with a new saw, for example, and expect that the rest of the plant will follow suit. For example, if you double or triple component production with a new automated saw, how do you assemble them into trusses or panels with the same staff and equipment? For that matter, do you even have staff and systems in place to cart two or three times the volume of finished components to the assembly stations? And that's assuming you have whatever's needed to deliver lumber stock—in the increased volume and at the correct times—to the saw in the first place. And that's just the tip of the adjustments-you'll-need-to-make iceberg. But I'll leave that for another discussion. SBC

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