



Why You Need Process Control

People like to talk about process control, but not everyone is willing to commit to implementing an effective process control program. So says Randy Carter, technologies specialist with flexography equipment, supplies and training company Anderson & Vreeland.

Process control is the practice of defining a system, says Randy Carter, that enables data measurement, analysis upon which adjustments are based, followed by remeasuring until the desired result is reached. “It’s quality control but it’s not just a check at the end of a process to say whether a part is good or bad,” explains Carter. “It’s a continuous process where you’re measuring to make small adjustments continually on the fly.”

Customers Expect Quality Control

According to the results of a recent industry survey Anderson & Vreeland conducted, 82% of respondents agree that having a quality control system in place decreases defects and rejected products. Further, 50% have a dedicated quality control or process control employee on staff. Most respondents have some level of formal quality check system in place, with the majority—90%—having one in their print departments (50% have one in their platemaking departments; 60% in converting; and 68% in prepress). Finally, the majority of respondents said that their customers either ask about or request process control or perform quality checks on their products.

Why Implement Process Control?

Good process control not only helps to create an improved product, but also better efficiencies for the printer, and the quicker problems are caught, the cheaper they are to correct, says Carter. Looking at several different measurements in a process and then analyzing combinations of measurements helps to narrow down where in the system adjustments need to be made. Instead of guessing which element needs attention, Carter advises taking multiple measurements of different systems and different metrics, and finding a common denominator, which will help to define the true problem. “The better an operator understands that and the better they learn that, the quicker they can correct the defects,” he says. “Or if they’re really good, they start monitoring the data before it gets out of control and it becomes a problem. Then you can make the adjustment ahead of time and predict it.”

Process Control is a Commitment

But one problem Carter often encounters is skepticism that process control is really a worthwhile resource investment. “Everybody talks about it but no one wants to spend the time or money or personnel to actually do it,” he says. For process control to work, he says, management first has to commit to a process control program, which includes purchasing the correct equipment, testing it, and training staff to use it properly. And sometimes that means adjusting expectations—it might mean giving operators more time to get the job done. “You have to realize this stuff takes time,” he says. “You can either put out 100 bad parts, or you can put out 90 good parts.”

If management doesn’t take process control seriously, employees might think it’s just a gimmick they don’t need to take seriously either. Carter has experienced instances where operators will invent data just to say it’s done. He recalls one experience when he was managing a large process control system in a plate making room. The numbers provided were all perfect, and all the same, and he became suspicious.

“When I dug the operators’ samples out of the trash, and measured them, they were nowhere near on target,” he remembers. “I found out they were just writing numbers down because the machine was broken and they thought they’d get in trouble if they reported it. There’s always a host of reasons and excuses to and it takes time to combat that.”

What’s the Best Training?

To get employees to commit to process control, training is important. There are a variety of training options available, some more rigorous than others. Large corporations might require their employees to undertake Six Sigma training, a program invented by electronics manufacturer Motorola in the 1980s to improve its own manufacturing output. Six Sigma levels are classified as belts: Yellow, Green, Black, and Master Black, with Yellow being the entry-level certification, and Master Black the highest. “Six Sigma is fairly expensive and it takes some dedication and time,” says Carter. “But it’s valuable because it teaches the basics of how to organize and how to analyze.”

For smaller companies, a less formal training will likely suffice. Anderson & Vreeland offers training with its technologies team. They use a common sense approach, says Carter, and try to make learning easy for the operator, straightforward, and actionable, with lots of hands-on work. “We explain this is what this instruments reads, this is why we’re reading this, and we try to show a cause and effect relationship, and the biggest thing, which is why it’s important to do.”

Automation and Process Control

Technology has made process control easier and more streamlined. Current equipment is much more automated than before, and most can wirelessly send data to a computer or store it on a memory card. This means the operator doesn’t need to use pen and paper, or even log onto a computer. Fewer steps means a better, less error-prone system, says Carter. “The more technology that automates the work involved, the easier it is to implement process control. The caveat is it’s more expensive and takes more time to set up initially and bit of expertise.”

The take-away for good process control implementation is that it needs be easy to understand, easy to do, and come with a commitment from both operators and management. When everyone’s on board, says Carter, they’ll understand why process control works. “When everything clicks, everybody says, ‘Wow, why didn’t we do this before?’”