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Why Are There **Any Defects at All?**

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Any company worth its salt stays on the lookout for ways to refine its processes. A conference made for that very purpose will be starting around the time this issue reaches you. The Assn. of Graphic Arts Training, PIA/GATF and the Foundation of Flexographic Technical Assn. are hosting the Continuous Improvement Conference April 15-18 in Jacksonville, FL.

Speakers, including keynoter Beau Keyte, founder of the Branson consulting firm, and Bob LePard, VP manufacturing of Graphic Printing Services, are covering practical ways to save time and money through process improvement.

Many companies embracing the lean methodology of quality control urged at this conference will recognize the Japanese term poka-yoke, widely used today for "mistake-proof." When a process step has been made mistake-proof, then product defects either cannot occur or they become obvious-and thus correctable-before production continues.

Used throughout the manufacturing value chain, poka-yoke conceptually prevents defects from passing through the process and allows for error correction at the point of occurrence, making life easier for manufacturers and ensuring product quality for customers.

Before I had ever heard of lean manufacturing, or poka-yoke specifically, I had the assignment to improve the quality of a manufacturing area which I oversaw. This particular area had many distinct process steps with multiple, free-standing pieces of equipment involved in the production process. I gave the quality a lot of attention and developed, with employees, a series of process checks to weed out any defects created by the process.

We became quite proud of our work and developed a reputation with our customers for having a strong focus on quality. On customer tours of the plant, we always relished showing off the thoughtfulness we had put towards quality.

Enter Mr. Donnelley

A unique opportunity came once as I was escorting Gaylord Donnelley, retired chairman of RR Donnelley & Sons Co., through the facility. I made certain to point out all the various quality checkpoints we had built in to prevent defects from moving downstream in the process and how we could successfully find defects very close to the actual point of their creation. Mr. Donnelley listened politely and let me elaborate on the extensive checkpoints and safeguards we had

in our system.

When I finally paused, he very gently placed his hand on my shoulder and asked, "Why are there any defects in the first place?" This question stopped my presentation cold because it was so obvious, yet it was one that we had not focused on well enough in our quality thinking.

Our focus had been on identifying and catching defects before they traveled on in the process, and we did this well. Asking the bigger question of why defects existed in the first place-and what could be done to eliminate them completely-had not yet been a big part of our thinking.

It is, of course, better to catch defects than let them through and have other value-added activities performed on lesser-quality work. It is best, however, to look at the overall process and redesign it, if necessary, not to produce defects that require mistake-proofing in the first place. Applying the concept of poka-yoke to a poor process is a band-aid at best-and not the focus on which you want to be building.

Cooper, who now teaches graphic arts at Cal Poly, his alma mater, had an 18-year manufacturing management career with RR Donnelley and Microsoft.

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