

Sampling Doesn't Improve Quality



Finishing Sampling Team
L-R Ed Smith, Jeff Baird, Torry Wickwire, Hubert Barnwell, Ron Rhodes, Bill Wike.

It's been a couple of years since we heard the first rumblings about SPC (Statistical Process Control) and how we were going to have improved processes by collecting data, charting, deciphering and analyzing information. About this same time an SPC expert, Herman Senter, PhD., Professor of Statistics from Clemson University, appeared on the scene. He told tales of how we could do things, not terribly unlike what we were

already doing, but "by analyzing data," he said, some of which we were already collecting "we could make significant improvement to our processes, have higher yields, with greater quality." It seemed that everywhere you looked, people were scurrying about starting SPC programs. Of course, these improvements were our goals all along. We just didn't know the statistical mechanics of how to go about it.

From Maintenance Services comes A Somewhat *Kinky* Human Interest Story

If there's a good sociological reason why friends and fellow workers gang up on each other, the mechanics probably aren't interested in it. They just have fun trying to get someone's goat.

On the days in question, the target goat belonged to Roy Sheehan, and the fellows were double- and triple-teaming him:

"You ought to do something about your hair, Roy."

"Maybe get a permanent wave or something . . ."

"Yeah, a curly perm. That's what you need, Roy, a curly perm!"

"You'd look good with curly hair; you really would."

A man can be silent for only so long. Roy launched his counter-attack with words to the effect that "If you want to pay for it, I'll do it!", prompting an almost instant flurry of dollar bills. Soon his associates were turning away contributors: "We got plenty of money. We just don't know where we go from here . . ."

"He's not really going to get a permanent — is he?"

"I made the appointment, and he said he'd be there."

"There's not enough 'peer pressure' in the whole world to get me in that place."

"Well, if he shows up, the woman has her instructions. We told her to curl it so tight that all Roy's grandchildren will have kinky hair."

Roy Sheehan is a man of his word. He kept his appointment in a businesslike fashion. He has curly hair.

Are his buddies satisfied? Not really.

"I got this uneasy feeling that we messed up somewhere. We forgot that beauty shops are in the beauty business. Roy's not beautiful, but you've got to admit that he looks pretty doggone good since he had his hair done."

"Now he's got the upper hand — and Sheehan is shrewd."

"I'm sort of worried that he's coming up with a way to make us pay again, when this permanent grows out!"

Roy Sheehan
BEFORE



Roy Sheehan
AFTER



The team pictured here, along with Perry Davis, Carlos Fisher, Jim Hunt, James Dahle and Mary Brown, began to look at sampling in Finishing. Some very strange *key learnings* were discovered:

- Sampling Doesn't Improve Quality
- Sample to Improve Process
- Improved Process Nets Increased Quality

What? "That's a natural reaction," the committee told us. It works like this. You can sample film all day, sort it into piles of good and bad, sample until your heart's content, even sample 100 percent. But, for all you've done, can you say you've improved the quality of even one piece of film? No! You've only rearranged what's been produced.

Operating on this premise the team went to work. They found we were sampling every box of film and total samples were 1.5% of our product. Believing that you cannot sample quality into the product, the team came up with a reduced sampling plan. This new sample schedule called for sampling every third box. "Once we saw what we were onto, we moved very quickly and aggressively," Bill Wike told us. In September the process was started on #12 chopper. "To date," Ed Smith added, "We have seen the

expected results. Through FPI's (Finished Product Inspections) we have seen no increase in quality problems. Also, there have been no customer complaints resulting from our actions."

Fotofax had to ask if it was difficult to get approval to make such drastic changes. The team members just looked at each other and finally Bill Wike replied. "We sort of used the Oliver North approach. We were so sure of what we were doing, we just did it."

The team's present goal is to get #8 and #10 on the new frequency schedule by the end of the second quarter of 1988. Once this is accomplished the plant will see a 1/2 percent increase in Finishing yield or a savings of \$500,000 - \$700,000 per year. This is based on reduced sampling, less man hours, chemicals in the lab and equipment avoidance in the lab. The amount of gains depend on the quality of coated wadstock received. "You see," the team members explained, "we've put a lot of pressure back on coating. They have responded very well. In December and January we saw the highest yields since 1983. This was while making low coating weight material which is more susceptible to defects. Our objective was to statistically reduce sampling at no cost to quality. We actually improved quality because Coating has improved the quality of the product they sent us."

Seen & Heard

Some Very Important Events: **Glenda (Holland)** and **Jeff Hawthorne** married 9-5-87 • **Alan and Debbie Johnson** — a baby girl, Jodie Nichole born 10-8-87. • **Morris Cannon** — a new grandson, Nicholas Dale Cannon, born 8-27-87. • A new daughter for **Eddie** and a new granddaughter for **Jack** — Kimberly Nichole **Gunter** born 9-24-87. • A new granddaughter for **Bill and Rachel Robinson** — Cori Nicole born 8-5-87. • **C.B. Branson** has a new granddaughter — Sarah Rebekah Soesbee. • **David and Betty Mings** have a new baby girl, Chantal Denise born 12-21-87. • Also, a new daughter, Julie Elizabeth, for **Mark and Rebecca Kelly** born 2-5-88. • **John Stroup** bought a new four-wheel drive vehicle for the big snow storm. • **John Gruca's** daughter, Karen, is a member of the #10 volleyball team in the whole USA. • Last issue we omitted a very important milestone, **Denis Barton's** 30 year service anniversary — Sorry, Denis. • Grandparent status for **John & Mildred Abney**, Pamela Grace born 12-6-87. • Proud pop; **Jim Rhodes** has four sons, Max, Mark, Jeff and Kelly, all of which have worked here at the plant; the youngest (Kelly) and oldest (Max) are both now in school at NC State. Max, the oldest, is married to **Larry Warner's** daughter, Susan, who is a chemistry major also at NC State. • "If you get mad at critics, you almost always can be sure they are right!" . . . Have we missed your good news? We're easy to find now, since we've moved into the old Credit Union offices. Come on down! or send us a note — we want to hear from you.

Du Pont Tuition Refund Program

In 1987 Brevard Plant employees took 96 college level courses for which 100% of their tuition was reimbursed through the tuition refund program.

All regular employees are eligible to participate in the program, subject to management approval of the course of study they wish to pursue. Temporary employees such as co-op students, summer hires, summer technical hires, other LSE's, manpower and contract employees are not eligible.

The purpose of the Tuition Refund Program is to encourage and aid regular employees in their self development efforts. It offers a way of obtaining knowledge or skills useful to them in their present or future work with DuPont.

If you have an interest in pursuing a degree or just taking a course or two to enhance your knowledge in a particular subject, stop by and discuss it with Keith Harbin in the Personnel Development office. It's a lot easier to participate in this program than you might imagine. You have nothing to lose and a lot to gain. A person's future is pretty much what they make it.