



The Lighthouse
March 2007
Elyria/Lorain Section 814
Mission Statement



*To advance community and member quality excellence through educational opportunities,
 non-competitive information exchange, networking, forming alliances and leadership growth*

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Meeting March 14th

WHAT:	CorrectSPC: When 'normal' is not typical. by Bob Doering
WHEN:	Wednesday, March 14th, 2007, Meeting starts at 6:00PM
WHERE:	Holiday Inn, Elyria See Map Here

Topic: CorrectSPC: When 'normal' is not typical.

Did you ever have the control limit calculations compress your limits to the point you could barely run the process? Have you run into Cpk values - either too high or too low, yet you felt the process was just fine? Did you ever have an operator ask you about a reading that was out of specification, but the mean was in control? These situations occur in precision machining frequently, and the problem is the distribution is not normal, but people are applying normal statistics and control charts to it and yielding wrong information. CorrectSPC is a technique that busts the myth of the normal curve in precision machining. It presents a technique that provides more information that is meaningful to the operator and the quality professional. No transformations, no defects, no extra cost!

Speaker

Bob Doering is the Quality Manager at FormTech, LLC in Canal Fulton, Ohio. He has been a professional in the quality field for over 13 years, and has industrial experience for over 28 years. His career has span various industries, including medical, aerospace, automotive and retail products. He has experience in the areas of precision machining, injection molding, compression molding extrusion, die cutting, air pollution control and chemical processing. He is an adjunct instructor at Lorain County Community College in Engineering Technology and Enrollment Services departments, and has lectured classes in Metrology and Quality Management. He holds various associates degrees from Lorain County Community College and The University of Akron in Ohio, and earned a BA in Business Administration and an MBA in Systems Management from Baldwin-Wallace College, Berea, Ohio. He is a CMQ/OE, CQE, CQA, CMI and RABQSA Provisional QMS Auditor.

CERTIFICATION CLASS CALENDAR

Classes are always offered in conjunction with the certification and require a minimum of 6 students.
 If less than 6 students register for a class it may be canceled.

YOU NEED TO CONTACT Michael.Haessly@adelphia.net NOT LCCC to register for classes

Exam Date		March 3, 2007	June 2, 2007	October 20, 2007	December 1, 2007
Registration Date		January 19, 2007	April 6, 2007	August 17, 2007	October 5, 2007
CBA	Biomedical Auditor	X		X	
CCT	Calibration Technician		X		X
CHA	HACCP Auditor -	X		X	
CMQ/OE	Quality Manager	X		X	
CQA	Quality Auditor		X		X
CQE	Quality Engineer		X		X
CQI	Quality Inspector	X		X	
CQIA	Quality Improvement Associate		X		X
CQPA	Quality Process Analyst		X		X
CQT	Quality Technician	X		X	
CRE	Reliability Engineer	X		X	
CSQE	Software Quality Engineer		X		X
CSSBB	Six Sigma Black Belt	X		X	
SSGB	Six Sigma Green Belt		X		X

Chair's Message

As this year is coming to an end we are looking for places for a plant tour for April and May. This is a chance for you, the members, to host a small tour through your plant and show the section how your plant does what it does. Please contact anyone on the Executive Committee, with your ideas for a plant tour. Your help will be greatly appreciated.

Other news is that we are working with the Technology Department at Lorain CCC to adjust the Quality Assurance programs to reflect the current directions in quality and better prepare the students to enter the quality area.

New Section Members

Please welcome the following new members to Section 0814.

Adrian J. Young
Edgar A. Secrest
Kenneth J. Dumke

Tracy L. Evans
Cheryl Lynch
Juanita K. Marquez

Paul J. Pfingsten

Tech Corner

What is Acceptance Sampling?

From <http://www.itl.nist.gov/div898/handbook/pmc/section2/pmc21.htm>

Acceptance sampling is an important field of statistical quality control that was popularized by Dodge and Romig and originally applied by the U.S. military to the testing of bullets during World War II. If every bullet was tested in advance, no bullets would be left to ship. If, on the other hand, none were tested, malfunctions might occur in the field of battle, with potentially disastrous results.

Dodge reasoned that a sample should be picked at random from the lot, and on the basis of information that was yielded by the sample, a decision should be made regarding the disposition of the lot. In general, the decision is either to accept or reject the lot. This process is called Lot Acceptance Sampling or just Acceptance Sampling.

Acceptance sampling is "the middle of the road" approach between no inspection and 100% inspection. There are two major classifications of acceptance plans: by attributes ("go, no-go") and by variables. The attribute case is the most common for acceptance sampling, and will be assumed for the rest of this section.

A point to remember is that the main purpose of acceptance sampling is to decide whether or not the lot is likely to be acceptable, not to estimate the quality of the lot.

Acceptance sampling is employed when one or several of the following hold:

- Testing is destructive
- The cost of 100% inspection is very high
- 100% inspection takes too long

It was pointed out by Harold Dodge in 1969 that Acceptance Quality Control is not the same as Acceptance Sampling. The latter depends on specific sampling plans, which when implemented indicate the conditions for acceptance or rejection of the immediate lot that is being inspected. The former may be implemented in the form of an Acceptance Control Chart. The control limits for the Acceptance Control Chart are computed using the specification limits and the standard deviation of what is being monitored (see Ryan, 2000 for details).

In 1942, Dodge stated:

"...basically the "acceptance quality control" system that was developed encompasses the concept of protecting the consumer from getting unacceptable defective product, and encouraging the producer in the use of process quality control by: varying the quantity and severity of acceptance inspections in direct relation to the importance of the characteristics inspected, and in the inverse relation to the goodness of the quality level as indication by those inspections."

To reiterate the difference in these two approaches: acceptance sampling plans are one-shot deals, which essentially test short-run effects. Quality control is of the long-run variety, and is part of a well-designed system for lot acceptance.

Schilling (1989) said:

"An individual sampling plan has much the effect of a lone sniper, while the sampling plan scheme can provide a fusillade in the battle for quality improvement."

According to the ISO standard on acceptance control charts (ISO 7966, 1993), an acceptance control chart combines consideration of control implications with elements of acceptance sampling. It is an appropriate tool for helping to make decisions with respect to process acceptance. The difference between acceptance sampling approaches and acceptance control charts is the emphasis on process acceptability rather than on product disposition decisions.

Message from the Editor

This newsletter is our method for informing you, the members of Section 0814, on meetings, plant tours, educational opportunities and other valuable information to you as Quality professionals. We hope that this information is useful and relevant to your daily activities both professionally at work and personally at home. In addition, attending the meetings, plant tours, and classes will earn you recertification units (RU's) to help maintain your certifications.

To make this newsletter more useful to you we would like your input on how to improve it. In addition to your suggestions we would also like give you the opportunity to publish some of your experiences or knowledge to the other members of the section. Please send your suggestions to michael.haessly@adelphia.net

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MEETING: Wednesday March 14th, 2007