Spring into Action:
Lean, Improve & Control Your Processes

WHO SHOULD ATTEND:
- QA/QC
- Process Excellence
- Operational Excellence
- Operations
- Engineering
- Continuous Improvement

TOP REASONS TO ATTEND:
- Lean Six Sigma Tools
- What is Useful Data?
- Review MSA-4:2010
- Networking

April 29, 2011 | NIU-Rockford, IL
8500 E. State Street, Rockford, IL 61108

Speakers

Charles Aubrey, ASQ Fellow, Vice President Performance Excellence, Anderson Packaging, Inc.

Gordy Skattum, ASQ Fellow, CCT, and Senior Member of SME, CMfgT

Tom Hall, PhD, Quality Manager, MedPlast

Jim Akers, ASQ Senior, Customer Quality Engineer, Woodward Inc., SSBB, CQE, and CRE

Mike Aston, Quality Assurance Manager, RathGibson, CQE

Limited Seating—Register NOW!!!

www.asq-rockford.org
When qualifying a multiple cavity mold, the total sample size can be reduced by using SPC. Plotting the data on an X bar and R chart, using cavities as the rational subgroup, you often see that all or nearly all the range points are ‘in control’. This indicates that each range is due to a single, underlying variability. So all the ranges can be combined to give an estimate of the underlying variability. This estimate can then be used to calculate capabilities for each individual cavity. For example, if you have a 16 cavity tool, instead of treating each cavity separately, with a sample size of, say, 30, you can use a sample size of 10 from each cavity, and use all 160 samples to estimate the variability (standard deviation) for all cavities. The added precision in knowledge of the variability more than compensates for the decreased knowledge of the average. This becomes especially helpful when cavitations are large – 32 and up, but can also be applied to molds with smaller cavitation.

Cavities that are out of control on the range chart can be studied separately. Even if sample size per cavity is not reduced (say a four cavity mold, 30 pieces per cavity), the knowledge of the standard deviation can be improved by combining the variability estimates from the different cavities.

Jim Akers is a Customer Quality Engineer and Black Belt with Woodward, Inc. He has held positions in the Continuous Improvement Group and Quality Department for the previous 12 years. Jim is an adjunct instructor with Southern Illinois University and Rock Valley College, a Senior ASQ member, CQE, CRE, and SSBB. Jim has earned a B.S in Electrical Engineering Technology and a M.S. in Manufacturing Systems.

Employee Involvement, the key to successful DMAIC, Mike Aston
This session will cover the basics of DMAIC and illustrate by example stories of successful projects and changes in the culture of an organization. The course will include some of the basic tools, lessons learned, and best practices.

Mike Aston is a Quality Assurance Manager with RathGibson, Inc. He has over 15 years experience in the quality field including the automotive industry. He is an ASQ CQE and has a Quality Specialist Degree.

Planning for a Successful Design of Experiment, Jim Akers
This presentation will provide a process for planning a design of experiment. We will cover; the basics of DOE, creating a charter, and choosing an appropriate design. The participants will go away with a DOE charter template and flowchart for simple design selection. The major focus is asking and answering the right questions to set yourself up with an appropriate experiment.

Jim Akers is a Customer Quality Engineer and Black Belt with Woodward, Inc. He has held positions in the Continuous Improvement Group and Quality Department for the previous 12 years. Jim is an adjunct instructor with Southern Illinois University and Rock Valley College, a Senior ASQ member, CQE, CRE, and SSBB. Jim has earned a B.S in Electrical Engineering Technology and a M.S. in Manufacturing Systems.

A Strategy to Decrease Sample Size required for Multi-Cavity Mold Qualifications, Tom Hall
When qualifying a multiple cavity mold, the total sample size can be reduced by using SPC. Plotting the data on an X bar and R chart, using cavities as the rational subgroup, you often see that all or nearly all the range points are ‘in control’. This indicates that each range is due to a single, underlying variability. So all the ranges can be combined to give an estimate of the underlying variability. This estimate can then be used to calculate capabilities for each individual cavity. For example, if you have a 16 cavity tool, instead of treating each cavity separately, with a sample size of, say, 30, you can use a sample size of 10 from each cavity, and use all 160 samples to estimate the variability (standard deviation) for all cavities. The added precision in knowledge of the variability more than compensates for the decreased knowledge of the average. This becomes especially helpful when cavitations are large – 32 and up, but can also be applied to molds with smaller cavitation. Cavities that are out of control on the range chart can be studied separately. Even if sample size per cavity is not reduced (say a four cavity mold, 30 pieces per cavity), the knowledge of the standard deviation can be improved by combining the variability estimates from the different cavities.

Tom Hall is the Quality Manager at MedPlast – Elkhorn, in Elkhorn, Wisconsin. Prior to that he was a Quality Engineer and Manager at Amerock, in Rockford, and a R&D Scientist and Lab Manager at Parker Pen in Janesville. He has served as the Education Chair for ASQ section 1205 for many years. He has a PhD in Physics, and has recently been teaching introductory Physics for Engineers at the University of Wisconsin – Rock County. Despite the PhD (a highly impractical thing to get), a company shrink once told him that he did seem to be a practical guy – at least enough for most industrial purposes.

The Truth About Data, Gordy Skattum
The Truth About Data was introduced in 2008 by the speaker and presented essential characteristics of useful data necessary for successful implementation of all quality tools and improvement strategies. This presentation will revisit the Truth About Data since 2008 and discuss the original and new developments in our quest for useful data and its’ impact on quality decisions.
**Lean Six Sigma Yellow Belt Introduction (Workshop Track 1)**

**Charles Aubrey**

Overview of Lean Six Sigma Yellow Belt tools: Lean Enterprise, Standardization, Process Map/Line Layout, 5S w/Exercise, SIPOC w/exercise, kaizen, Eight Wastes w/exercise, Debrief Eight Wastes Found in the Workplace, Spaghetti Diagrams, Non-Value Adding Activities, SMED, Cause and Effect Diagrams, Autonomation, Mistake Proofing, Visual Standards, and Controls.

Charles Aubrey is currently Vice President Quality and Performance Excellence and is a Master Black Belt at Anderson Pharmaceutical Packaging a subsidiary of Fortune 500 AmerisourceBergen Corporation. He was formerly President and is now Chairman of the Asia Pacific Quality Organization and their Representative to the World Alliance for Quality. In addition, Charles is an Academician and Vice President of Conferences for the International Academy for Quality.

He has written two books, Quality Management in Services and Teamwork-Involving Employees in Quality and Productivity. He has also written chapters in six other books, most notably in Dr. Juran’s Quality Management Handbook. He has published over 100 articles and papers that have been translated into a variety of languages including English, Spanish, Italian, Portuguese, Chinese and Arabic.

---

**The new MSA-4:2010, One Step Forward, Two Steps Back (Workshop Track 2)**

**Gordy Skattum**

Released in June, 2010, the automotive Measurement Systems Analysis Reference Manual, MSA-4, is being implemented by industry and software developers. Although MSA is a positive contribution to the field and discipline of measurement assessment, specific changes introduced in MSA-4 represent a step backward in the evolution and practice of measurement systems analysis for industrial applications. These changes will impose significant burden and confusion on users who implement the guidelines and ultimately lead to waste.

This session will present an objective review of MSA-4:2010 in light of best measurement practice for product and process control. It will examine the importance of proper planning, the Error Model, design, methods, and evaluation of measurement systems using case studies and alternative recommendations.

As an ASQ Fellow, CCT, and Senior Member of SME, CMfgT, Gordy is an applications specialist and instructor in areas of precision metrology and quality engineering methods applied to manufacturing. He is a principle instructor for the Mitutoyo Institute of Metrology and former regional instructor for the Boeing Advanced Quality System (AQS). Gordy serves on various technical committees for the American Measuring Tool Manufacturer’s Association (AMTMA), the National Conference of Standards Laboratories International (NCSLI), ASQ Certified Calibration Technician Committee, and various national and regional technical committees for advanced manufacturing and measurement. He was a significant contributor to the international MSA-3 Reference Manual, 2003.
### THE SEMINAR SCHEDULE

**April 29, 2011**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45 – 8:15</td>
<td>Registration and Continental Breakfast</td>
</tr>
<tr>
<td>8:15 – 9:15</td>
<td>Jim Akers, Planning for a Successful Design of Experiment</td>
</tr>
<tr>
<td></td>
<td><strong>Track 1 Presentation</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Track 2 Presentation</strong></td>
</tr>
<tr>
<td>9:15 – 10:15</td>
<td>Mike Aston, Employee Involvement, the key to successful DMAIC</td>
</tr>
<tr>
<td></td>
<td>Tom Hall, A Strategy to Decrease Sample Size required for Multi-Cavity Mold Qualifications</td>
</tr>
<tr>
<td>10:15 – 10:30</td>
<td>Refreshment Break</td>
</tr>
<tr>
<td>10:30 – 12:00</td>
<td>Gordy Skattum, The Truth About Data</td>
</tr>
<tr>
<td>12:00 - 1:00</td>
<td>Lunch Provided</td>
</tr>
<tr>
<td></td>
<td><strong>Track 1 Workshop</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Track 2 Workshop</strong></td>
</tr>
<tr>
<td>1:00 – 4:00</td>
<td>Chuck Aubrey, Lean Six Sigma Yellow Belt Intro</td>
</tr>
<tr>
<td>(Refreshment Break 2:30-2:45)</td>
<td>Gordy Skattum, The new MSA-4-2010, One Step Forward, Two Steps Back</td>
</tr>
</tbody>
</table>

### Directions to NIU-Rockford:

From I-90, exit East State Street going East. (left). Then turn north (left) onto University Drive. Turn east (right) onto Northern Avenue. NIU-Rockford is on the right. Parking is free; no permits are needed.

Any questions, please contact Linda Ruggerio @ 815-315-3641  
e-mail: Linda.ruggerio@chrysler.com or Diane Konopa 815-742-6494 e-mail: dkonopa@andpkg.com.

Recertification certificate for 0.7 units will be issued to all applicable attendees.

[www.asq-rockford.org](http://www.asq-rockford.org)
Spring into Action:
Lean, Improve & Control Your Processes

Registration Form

Name:__________________________________________
Address:_________________________________________
City:_________________________________State:____________Zipcode:______________
Phone Number:___________________________________
Company:________________________________________
Title:____________________________________________

Please Circle your Track Selections:

<table>
<thead>
<tr>
<th>Presentation:</th>
<th>Track 1</th>
<th>Track 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop:</td>
<td>Track 1</td>
<td>Track 2 (Optional: provide an additional $45 for MSA book (limited quantity available))</td>
</tr>
</tbody>
</table>

Please send this completed form along with personal check or business check to:
(Sorry we cannot process any purchase orders or electronic payments.)
ASQ Rockford Section #1205
P.O. Box 8055
Rockford, IL 61125

Register at the March 17th or April 21st Dinner Meeting—Remember seating is limited.

EARLY BIRD $99 is due if your envelope is post marked by April 1st
$150 is due if your envelope is post marked after April 1st
Add $45 if purchasing MSA book

Total $ enclosed:________________

Registration Deadline: April 24, 2011
www.asq-rockford.org