



## The Inside Q

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*This newsletter is published each month. The office address is:*

ASQ Section 0915  
The 2425 Building Suite 402  
2425 U.S. Highway 41 North  
Evansville, IN 47711

*Distribution of this newsletter is sent by email to all members of the local section as listed by the national office.*

Newsletter Chair:  
Brian Wilson  
[asq0915newslettereditor@gmail.com](mailto:asq0915newslettereditor@gmail.com)

*Please contact me with information that you would like to include in the next newsletter.*

*The local section information is located at:*

**Evansville/Owensboro  
Section 0915 Web Site:**  
<http://www.asq0915.com/>

**ASQ National Web Site:**  
<http://www.asq.org>

## November Newsletter

### Dinner Meeting Agenda



**DATE:** Tuesday, November 10, 2015  
**TOPIC:** Plant Tour  
**PRESENTER:** Dana Plant Staff  
**LOCATION:** Dana Corporation,  
1491 Dana Dr, Henderson, KY.

### Please note visitor restrictions on page 2.

**TIMES:** 5:00 pm Register & Network  
5:30 pm Dinner  
5:45 pm Presentation  
6:15 pm Tour

**COST:** **\$17 per member**

**RSVP:** Please make reservations  
**by noon Friday, November 6<sup>th</sup>**  
by sending an email to Tom Watson at  
[tom.watson@kimballelectronics.com](mailto:tom.watson@kimballelectronics.com).

Dinner accommodations cannot be guaranteed for reservations received after the 12-noon deadline date.

**Please note:**  
**If you make a reservation and do NOT show up, the section has to pay for your dinner!**

### Mission:

Promote Quality and provide value to our membership and local businesses by continual improvement of information and services, meeting content, and training/education.

### In The Q- 2015

#### Website Updates!

Check out our Section 915 website <http://www.psci.net/asq915> for information about our section and upcoming section events, training and more.

**We welcome our new members and hope to see you at a dinner meeting soon.**

## Directions to:

**DANA in Henderson, 1491 Dana Dr, Henderson, KY**

From I-69 and US 41

- Take US 41 South over the Ohio River/
- As you continue south take the Pennyrile Parkway to KY 425 West (exit 76).
- Continue on 3 lights to US 60 East for about 0.3 mile and turn left onto Dana Drive.

**PLEASE NOTE: DANA has the following restrictions on visitors:**

**Must be a US citizen.**

**Safety glasses with side shields are required.**

**Snap on side shields will be available.**

**Metatarsal steel toe shoes are required.**

**Metatarsil guards are available for those with laseup steel toe shoes.**

**Otherwise, a small selection of loaner shoes are available on a first come first served basis.**

**No competitors allowed.**

## Future Dinner Meetings

Date	Topic	Location	Presenter
12/8/2015	Your Problem Statement is the Problem	Riviera Grill, Newburgh, IN	Mike Mazu

## Future Board Meetings

**Location:** The 2425 Building Board Room, 2425 U.S. Highway 41 North, Evansville, IN 47711

**6 pm on the following dates: November 5, December 3, and January 7.**

## CERTIFICATION TEST SCHEDULE

Test Date: 12/5/2015

Application Date: past

Calibration Technician, Pharmaceutical GMP Professional, Quality Auditor, Quality Engineer, Quality Improvement Associate, Quality Process Analyst, Six Sigma Greenbelt, Software Quality Engineer

Test Date: 3/5/2016

Application Date: 01/15/16

Biomedical Auditor, HACCP Auditor, Manager of Quality, Quality Inspector, Quality Technician, Reliability Engineer, Six Sigma Blackbelt, Six Sigma Yellow Belt

The dates above are for the local certification exams. Late applications have an extra \$50.00 charge.

Exams are held at Ivy Tech Community College, Evansville, IN Room 259.

**If you miss a test due to weather, notify the Examiner or National so that you can reschedule without losing the test fee.**

Contact Cleat Smerchek at  
for more information see

[csmerchek@hansen-motor.com](mailto:csmerchek@hansen-motor.com)  
<http://www.asq.org/certification/>

## **SECTION 0915 PLACEMENT SERVICE**

**Job Seekers** - if you would like to be placed on a confidential email distribution list to be notified of job opportunities made known to the ASQ Section 0915 Placement Chair, please contact Placement Chair:

David McGan, McGan Business Solutions,  
53 Dorsey St., Corydon, KY 42406  
[dmcgan@mcgangroup.com](mailto:dmcgan@mcgangroup.com)  
270-823-2831

**For national job postings, see:**

<http://www.asq.org/career/index.html>

**Job Providers** - if you have a job opening that you would like distributed to those on the ASQ Section 0915 Placement Distribution list, send a detailed description of the job, including location, and **appropriate contact information**, to:

[dmcgan@mcgangroup.com](mailto:dmcgan@mcgangroup.com)  
270-823-2831

Those interested in learning more about your opportunity may then contact you directly.

## **RE-CERTIFICATION:**

Re-certifications may be sent to:

**Michael Gross**  
2943 Meadowland Dr.,  
Owensboro, KY 42303  
[Smoky1001@yahoo.com](mailto:Smoky1001@yahoo.com)  
FAX: 270 730 6730

Please submit at least three weeks prior to the recertification/test dates above.

If a recertification application was due on 7/31/2014, there is a six-month grace period. Send the information to Michael Gross **ASAP** in order to retain the certification without re-testing.

Please send the information to Michael Gross ASAP to allow him time to review it and send the information to National.

Any questions can be directed to the e-mail above.

MJM Associates  
Michael J. Mazu, Principal Consultant

MJM Associates are consultants in process management. Michael J. Mazu has over forty six years experience with two Fortune 100 companies (BF Goodrich and Alcoa) in applying design of experiments, statistical process control, problem solving, six sigma and lean techniques, acceptance sampling concepts, gage and process capability, measurement assurance, process management, total quality management, quality improvement techniques and quality engineering in an industrial environment. His experience has involved over 150 manufacturing plants in the United States, Canada, Mexico, Brazil, Great Britain, France, Germany, Russia, Hungary, Australia and China.

The objectives of MJM Associates are:

- To provide concentrated consulting and training to help organizations manage their processes.
- To understand the needs of the client and custom design a consulting and training program to achieve their needs.

For more information, contact Michael Mazu at:  
812-853-9443 (H) or 812-459-9303 (M)

[pmazu@roadrunner.com](mailto:pmazu@roadrunner.com)

<http://sites.google.com/site/mjmassociatesinc/home>



# Evansville-Owensboro ASQ Section 915 2015 FALL (Aug.-Dec.) Workshops and Classes



Shown below is the education offerings with a brief description for the Fall 2015 (August-December) session. These details can be viewed at <http://www.psci.net/asq915/education.htm> . Please take the time to review this opportunity and if possible attend one of these training opportunities. Please pass this information onto others in your organization that you think may have an interest in these courses. If you don't see a course or topic that you have an interest in, please contact me and I will see what I can do for you.

Michael J. Mazu, Education Chair at [pmazu@roadrunner.com](mailto:pmazu@roadrunner.com) or **812-459-9303**.

## Fall, 2015 – Instructor Led Courses

Course	Total # Hours	Cost	Description
<b>Evaluating and Interpreting Process Capability</b>  <b>Starts Dec 12, 2015</b>	4	\$50	The objective of this interactive workshop is to provide the individual with a working knowledge of how to evaluate a process for capability and to determine the next steps for process improvement. Topics covered will include: steps in determining process capability, performing a potential study analysis, performing a short term study analysis, performing a long term study analysis, and interpreting the results of a capability study in order to improve the performance of the process. Individuals will also be shown how to use Minitab to calculate the capability of a process and the various capability indices.
<b>Evaluating and Gage Process Capability</b>  <b>Starts Dec 5, 2015</b>	4	\$50	The objective of this interactive workshop is to provide the individual with a working knowledge of how to evaluate the capability of a gage or measuring system. Topics covered will include: methods for analyzing gage capability studies, estimating accuracy, estimating repeatability and reproducibility, AIAG method, analyzing a potential study, analyzing a short term study, analyzing a long term study, and interpreting the results. Examples will be used throughout the session so that individuals can interactively participate in interpreting the results . The course will stress how to interpret the results in order to improve the measuring system. Individuals will also be shown how to use Minitab to calculate the capability of a gage and the various capability indices.

<b>Introduction To Process Management</b>  <b>Starts TBA</b>	16	\$200	<p>The course will begin by discussing the concepts of process management, responsibilities of management, and a general deployment model. The course will concentrate on the significant phases of deployment. The first phase is to identify the customer and business requirements, the key performance indicators, the goals and objectives of the organization and the key processes.</p> <p>The second phase we measure the current performance of the process. In the third phase we analyze the current performance of the process to determine current control and capability of the process. In the fourth phase we develop and deploy process control in order to manage the process on an on-going basis.</p> <p>In the fifth phase we focus on improving the performance of the process. In the sixth phase is where the organization institutionalizes the process control activities to sustain the process in control and capable.</p> <p>A case study will be presented throughout the course to illustrate the various concepts and activities of process management. This course should be considered basic to immediate. A training manual with over 170 pages is included.</p>
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### Individual Self Paced Courses:

Course	Cost	Date and Time
<b>Certified Quality Technician Review (all Modules)</b>	\$75	At your convenience and all materials will be provided after paying the course fee.
<b>Course Description</b>	See the course description for the instructor led CQT course. Self paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.	

Course	Cost	Date and Time
<b>Certified Quality Engineer Review (all Modules)</b>	\$150	At your convenience and all materials will be provided after paying the course fee.
<b>Course Description</b>	See the course description for the instructor led CQE course. Self paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.	

Course	Cost	Date and Time
<b>Statistics Review For ASQ Certification Exams</b>	\$100	At your convenience and all materials will be provided after paying the course fee.
<b>Course Description</b>	See the course description for the instructor led Statistics Review For ASQ Certification Exams course. Self paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.	

Course	Cost	Date and Time
<b>Practical Problem Solving</b>	\$50	At your convenience and all materials will be provided after paying the course fee.
<b>Course Description</b>	See the course description for the instructor led Practical problem Solving course. Self paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.	

Course	Cost	Date and Time
<b>Statistical Process Control</b>	\$75	At your convenience and all materials will be provided after paying the course fee.

<b>Course Description</b>	See the course description for the instructor led SPC course. Self-paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.
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<b>Course</b>	<b>Cost</b>	<b>Date and Time</b>
<b>Introduction To Process Management</b> <b>NEW</b>	\$75	At your convenience and all materials will be provided after paying the course fee.

<b>Course Description</b>	See the course description for the instructor led Introduction To Process Management course. Self-paced courses provide the same materials but have no specific start and end dates – you do the work at a time convenient to you.
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Note:

(1) These courses are also available for on-site training (days or evenings). Our instructors will come to your company to train a group of 5 or more. We will customize the course to meet your needs and it will save you travel time. The courses will be provided at the above costs plus travel expenses for the instructor. Please contact M. J. Mazu for more details.

(2) **The minimum number of individuals per Instructor Led course is 5.**

(3) For the courses that have modules, you may sign up for all modules or you may sign up for 1 or more modules.

**Questions about the upcoming courses or on-site training, please contact M. J. Mazu at [pmazu@roadrunner.com](mailto:pmazu@roadrunner.com) or 812-459-9303.**

## Registration

Please check the course(s) for which you are registering (Course descriptions can be viewed at <http://www.psci.net/asq915/education.htm> ).

For the courses that have modules, you may sign up for **all modules** or you may sign up for **1 or more modules**.

**Please check the Instructor Led course(s) for which you are registering.**

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Evaluating and Interpreting Gage Capability, <b>\$50</b> , starts Saturday, December 5, 2015, 8am-12pm, finishes the same day. The course text is instructor developed manual and handouts.     |
| <input type="checkbox"/> | Evaluating and Interpreting Process Capability, <b>\$50</b> , starts Saturday, December 12, 2015, 8am-12pm, finishes the same day. The course text is instructor developed manual and handouts. |

**Please check the Individual Self Paced course(s) for which you are registering.**

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Certified Quality Technician (CQT) Review (all Modules), \$75 (with all materials)             |
| <input type="checkbox"/> | Certified Quality Engineer Review (CQE) (all Modules), \$150 (with all materials)              |
| <input type="checkbox"/> | Statistics Review For ASQ Certification Exams Review (all Modules), \$100 (with all materials) |
| <input type="checkbox"/> | Practical Problem Solving (all Modules), \$50 (with all materials)                             |
| <input type="checkbox"/> | Statistical Process Control (SPC), \$75 (with all materials)                                   |
| <input type="checkbox"/> | Introduction To Process Management, \$75 (with all materials)                                  |

Name: \_\_\_\_\_ ASQ Member # (if a member): \_\_\_\_\_  
Company: \_\_\_\_\_ Home Phone: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Business Phone: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_ Email: \_\_\_\_\_  
Do you have any special requirements of which we should be aware?  
\_\_\_\_\_

## **Make Checks Payable to Evansville-Owensboro ASQ Section 915**

Send the completed registration form and payment to M. J. Mazu, 5311 Woodridge Dr, Newburgh, IN 47630

### Course Cancellation Policy:

1. Substitutions can be made at any time.
2. Cancellations can be made up to the published registration deadline with no penalty. Registrants who fail to attend will be liable for the entire course fee.
3. The Evansville-Owensboro section reserves the right to cancel any course prior to the start of the course for any reason with full refund.
4. The minimum number is five (5) registrants for an advertised course. **The cutoff date for registration is one (1) week prior to the course start date.** Registrants will be notified prior to the first class if the minimum attendee requirement has not been reached.

All courses will meet at (unless noted differently):  
2425 Building (Room 500 Conference Room)  
Corner of Hwy 41N and Diamond Ave Evansville, IN

All Courses available to ASQ members and non-members  
Questions about the courses please contact M. J. Mazu at  
[pmazu@roadrunner.com](mailto:pmazu@roadrunner.com) or 812-459-9303

## ASK MIKE

*The purpose of this column is to help local ASQ members better understand the Society, the local section, the philosophy of total quality management and the tools of quality by allowing section members to send or give questions to Mike. You can contact Mike by calling (812)-459-9303 or writing to 5311 Woodridge Dr., Newburgh, IN 47630 or Email to [pmazu@roadrunner.com](mailto:pmazu@roadrunner.com).*

### **Q. What is the difference between specification limits and control limits?**

First there is a difference between specification limits and control limits and this has confused many individuals. Basically, specification limits have to do with the voice of the customer while control limits have to do with the voice of the process. Specification limits come from the customer and define the allowable deviation from target (i.e., 15 inches  $\pm$  0.25 inches) for a quality characteristic of the product they are purchasing from you, the supplier. Practitioners should understand that specification limits are something forced upon a process; not part of its natural voice. The specification limits are set by the customer and they do not change unless the customer changes them. Specification limits are used to determine your process capability and apply to the individual items being measured.

Control limits are used in conjunction with control charts. Control limits are calculated from the data points (current performance) collected from the process. They are the voice of the process telling you what variability the process has produced in the past, with the intention of recognizing when a sufficient change from the past has occurred to justify adjusting the process. It is possible for a process to be incapable of meeting a specification while remaining in statistical control - we are predictably making product out of specification. By comparing on-going data to these lines, you can draw conclusions about whether the process variation is consistent (in control) or is unpredictable (out of control, affected by special causes of variation).

The table below compares control limits and specification limits:

<b>Control Limits</b>	<b>Specification Limits</b>
Voice of the process	Voice of the customer
Calculated from process data	Defined by the customer
Appear on control charts	Appear on histograms
Apply to rational subgroups	Apply to items
Guide for process actions	Separate good items from bad
What the process is doing	What we want the process to do

Confusing control limits with specification limits leads to mistakes. The most common mistake is to use specification limit values instead of control limit values on an X-bar chart or an Individuals chart and making decisions about process control. Using specification limits on an X-bar is the most notable error.

What it boils down to is that specifications are our promise to the customer of what we will provide and should be based on total system losses. Control limits show the range of variability we expect from the process and are based on actual process output. While process variability affects the total process losses, the specification limits in no way influence the control limits.

**Q. I understand the calculations behind Cpk and actually prefer the use of Zmin, but I'm finding out that within the formula for Cpk the factor that can be questioned or debated is the method by which standard deviation or sigma is calculated. I understand that many of the text books and standards use R-bar over d2, but some software packages use s-overall and when you compare the Cpk from one statistical package to another, sometimes they are significantly different. Why?**



I agree we have confused the world on how to estimate the capability or variability of a process. Too many hands stirring the pot, I guess. I think everyone has forgotten what we are trying to estimate – the capability or the ability of the output from the process to meet the customer expectations **consistently over time**. To do this we need to estimate the process variation. There are two ways to measure this variation:

- (1) The natural or inherent variability at a specified time; that is, the “instantaneous” variability. We usually use  $\bar{R}$  over  $d_2$  to make this estimate.  $\bar{R}$  is nothing more than the average of several short term or instantaneous subgroup ranges. This is ok if the process average (measured by the subgroup averages) is **in control** over this period of sampling.
- (2) The variability over time; that is, the variability of process over machines, shifts, days, etc. This is usually measured by using  $S$ -overall or  $S$ -total (the standard deviation of all the individual data in one “happy” big group. This is ok if the process average (measured by sub averages or the overall average of the individual values) is **in control** over this period of sampling.

Notice that the phrase “in control” appears in both (1) and (2). If the out of control is due to trends or sudden shifts in the process average then the estimate of process variation using the standard deviation (that is,  $s$  overall) of the individual results will be statistically bigger than that based on the  $\bar{R}$ . Therefore, the  $C_{pk}$  estimates will be different.  $C_{pk}$  based on  $s$ -overall will be less than the one based on  $\bar{R}$ . The assumptions of in control, normality and independence are extremely important. Any violation in one or more of these assumptions will affect the estimate of  $C_{pk}$  when using (1) and (2).

### Advertise in the News On Quality

- ✓ Support Section 0915
- ✓ Reach hundreds of Quality Professionals each month

Size	Approx. Size	Cost per Year	Cost per Issue
Full Page	7.5" x 10"	\$320	\$45
Half Page	7.5" x 5"	\$210	\$35
Quarter Page	3.5" x 5"	\$110	\$25
Eighth Page	3.5" x 2.5"	\$60	\$15

The ad will also appear on Section 0915 web page

### NOT GETTING THE EMAIL MEETING NOTICES?

*Have you moved, changed jobs, or changed your email address? Help us keep you informed of Section events and information by updating your contact information at [www.asq.org](http://www.asq.org). Log in and click on Change Address to update your membership record*

#### TO CHANGE YOUR ASQ EMAIL ADDRESS:

Sign on to <http://www.asq.org>

At the top of the page, click Log-In

Type in your membership number and ID. If you don't have an account setup, fill in your membership number in both the account number and password fields.

Click on My Account and then Email Preferences. Make sure the third line

ASQ Section Communication

has the first radio button lit up. If not, select the first button.



**ASQ**  
 Evansville-Owensboro Section 0915  
 The 2425 Building  
 2425 U.S. Highway 41 North - Suite 402  
 Evansville, IN 47711



Position	Name	Organization	Phone	Email
<b>Executive Committee 2015</b>				
Section Chair	David McGan	MBS-McGan Business Solutions	(270) 823-2831	<a href="mailto:dmcgan@mcgangroup.com">dmcgan@mcgangroup.com</a>
Vice Chair	vacant			
Secretary	Brian Wilson	First Call Quality	(812) 618-5234	<a href="mailto:asq0915newslettereditor@gmail.com">asq0915newslettereditor@gmail.com</a>
Treasurer	Willy Zech	Kimball Electronics	(812) 634-4143	<a href="mailto:willy.zech@kimballelectronics.com">willy.zech@kimballelectronics.com</a>
<b>Committee Chairs 2015</b>				
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Certification	Cleat Smerchek	Hansen Corporation	(812) 385-1506	<a href="mailto:csmerchek@hansen-motor.com">csmerchek@hansen-motor.com</a>
Education	Mike Mazu	MJM Associates	(812)-459-9303	<a href="mailto:pmazu@roadrunner.com">pmazu@roadrunner.com</a>
Examining	Cleat Smerchek	Hansen Corporation	(812) 385-1506	<a href="mailto:csmerchek@hansen-motor.com">csmerchek@hansen-motor.com</a>
Historian	Jim Bakke	Allstate Tower, Inc.	(270)748-1425	<a href="mailto:Jimbakke1@gmail.com">Jimbakke1@gmail.com</a>
Nominating Chair	Brian Wilson	First Call Quality	(812) 618-5234	<a href="mailto:bwilson@fcqs.com">bwilson@fcqs.com</a>
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Placement	David McGan	MBS-McGan Business Solutions	(270) 823-2831	<a href="mailto:dmcgan@mcgangroup.com">dmcgan@mcgangroup.com</a>
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Recertification	Mike Gross	DSSA	(270) 274 2600	<a href="mailto:Smoky1001@yahoo.com">Smoky1001@yahoo.com</a>
Scholarship	David McGan	MBS-McGan Business Solutions	(270) 823-2831	<a href="mailto:dmcgan@mcgangroup.com">dmcgan@mcgangroup.com</a>
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