



Society of Manufacturing Engineers Wabash Valley Chapter 275

September, 2006

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Upcoming Dates

- Sep. 14 Wabash meeting
- Oct. 12 Wabash meeting
- Nov. 17 Wabash meeting
- Dec. TBD Wabash meeting
- Jan. 11 Wabash meeting
- Jan. 25 Motorsports
Conference Indianapolis, IN
- Feb. 8 Wabash meeting
- Mar. 8 Wabash meeting
- Mar. 26-29 WESTEC
Los Angeles, CA
- Apr. 12 Wabash meeting
- May. 10 Wabash meeting
- May 22-24 EASTEC
W. Springfield, MA
- Jun. TBD Wabash golf outing

SME Wabash Valley 275 Meeting Schedule

September 14, 2006, Thursday

5:30 PM Tour of Ivy Hill Corporation, 4025 3rd Parkway, Terre Haute, IN 47804. People attending the tour must submit their name and company in advance of the meeting. No walk-ins will be allowed. You may join us for dinner, even if you do not go on the tour, reservations still required.

7:00 PM Dinner at Gerhardt's Bierstube Restaurant, 1724 Lafayette Avenue, Terre Haute, IN 47804. Dinner will be family style, \$10 per person, with ASQ and SME paying the additional costs for the meal. Reservations required by Monday, September 11, contact Roy Boissy (812) 237-8329 or arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting. Everyone welcome.

October 12, 2006, Thursday

6:00 PM Dinner at Holiday Inn, 3300 US Hwy 41 S, Terre Haute, IN 47802

7:15 PM Dr. Bernard McGarvey, Measurement Error

Reservations required by Monday, October 9, contact Roy Boissy (812) 237-8329 or arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting. Everyone welcome.

November 17, 2006, Friday

Steel pan theory and concert
Indiana State University
Times and location will be given later.

Reservations required by Tuesday November 14, contact Roy Boissy (812) 237-8329 or arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting. Everyone welcome.

December, 2006

Holiday Celebration, spouses are invited.
Times and location will be given later.

For reservations, contact Roy Boissy
(812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

January 11, 2007, Thursday

Specialty Blanks tour, 1033 Crawford
Street, Terre Haute, IN 47803
Times will be given later.

Reservations required by Monday, January
8, contact Roy Boissy (812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

January 25 - 27, 2007

SME Motorsports Indianapolis Conference
& Exposition, Indiana Convention Center,
Indianapolis, IN. More information is on the
SME web site.

February 8, 2007, Thursday

Dr. LeRoy Franklin talk on Statistics
Times and location will be given later.

Reservations required by Monday, February
5, contact Roy Boissy (812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

March 8, 2007, Thursday

Novelis tour, 5901 North 13th Street, Terre
Haute, IN 47805. Steel toed shoes
required. Safety glasses and earplugs will
be provided. This is the former Alcan
facility. Times will be given later.

Reservations required by Monday, March 5,
contact Roy Boissy (812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

March 26 - 29, 2007

SME WESTEC, Los Angeles, CA. More
information is on the SME web site.

April 12, 2007, Thursday

Student donation night
Times and location will be given later.

Reservations required by Monday, April 9,
contact Roy Boissy (812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

May 10, 2007, Thursday

Challenge X update, Rose-Hulman Institute
of Technology
Times and location will be given later.

Reservations required by Monday, May 7,
contact Roy Boissy (812) 237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

May 22 - 24, 2007

SME EASTEC, W. Springfield, MA. More
information is on the SME web site.

June, 2007

Golf outing at the Country Club of Terre
Haute, 57 Allendale Street, Terre Haute, IN
47802
Picnic to follow after the golf outing.
Times will be given later.

For reservations, contact Roy Boissy (812)
237-8329 or
arrangements@asqwabashvalley.org
Joint SME, ASM and ASQ meeting.
Everyone welcome.

Certification Corner

The current SME Certifications are:

- CMfgT - Certified Manufacturing Technologist
- CMfgE - Certified Manufacturing Engineer
- CEM - Certified Engineering Manager
- CEI - Certified Enterprise Integrator
- Six Sigma Certification
- Lean Certification

More information on all SME Certifications may be found at <http://www.sme.org> then click on Professional Development drop down menu Certification.

SME Member Activity

Welcome new Chapter 275 Members:

- Ryan S. Garrison
 - Matthew C. Kelly
 - Ryan A. Messmore
-

SME Plan 2010... Emphasizing Involvement and Relationships

The five goals of SME Plan 2010 are listed below; for complete text of the plan, including detailed strategies for achieving each of the goals, go to the SME web site.

SME Plan 2010: Five Goals

Goal 1: Technology & Information. SME will be the manufacturing technology information resource for people and companies throughout the manufacturing supply chain.

Goal 2: Commitment to Education. SME and its Education Foundation will be known as advocates and a leading resource for manufacturing education.

Goal 3: Member Engagement. SME will actively engage people and companies in their communities of interest.

Goal 4: Loyalty & Visibility. SME will be an integrated organization whose values, programs and brands are respected and well known.

Goal 5: Lean & Effective. SME will be a people-focused organization that strives to be lean and effective.

Internet Information and Web Sites

This month we will describe how to log onto the SME web site, and review the SME Discussion Boards.

The advantages of logging onto the SME web site include that you can change your personal preferences, renew membership, and have access to Members only benefits. To log on, go to the SME International web site at <http://www.sme.org>. Click on Login at the top right. Enter your last name and member number, then click Proceed.

From this page, you have access to several member benefit areas. If you click on Members, you can Update your member information. If you click on Technical Community Network, there are several technical communities that you can join.

From the Members page or several other pages, if you hold the mouse on the second row from the top, over Technical Communities, and then click on SME Forums on the drop down menu, you will enter the SME Discussions area. You can read any of the posts in this area, but if you wish to post a message, you will need to create a User name and password first. Be sure to read the FAQ for information, rules and etiquette.

The following are the Technical Communities:

- Automated Manufacturing & Assembly Community
- Forming & Fabricating Community
- Machining & Material Removal Community
- Manufacturing Education & Research Community
- Plastics, Composites & Coatings Community
- Product & Process Design and Management Community
- Rapid Technologies & Additive Manufacturing Community
- Additional Technologies
- Special Interest Groups
- SME Chapters
- Ask the Librarian
- Science, Technology, Engineering Preview Summer (STEPS)

Relevant Internet Web Sites

SME Wabash Valley, Chapter 275
<http://chapters.sme.org/275/>

SME International
<http://www.sme.org>

ASQ Wabash Valley, Section 0919
<http://www.asqwabashvalley.org/>

ASQ International
<http://www.asq.org>

ASM Wabash Valley
<http://chapters.sme.org/275/asm.htm>

ASM International
<http://www.asminternatinal.org>

SME Wabash Valley Officers for 2006

Hank Leonhardt, Chair
Michael Hayden, Vice Chair
Bill Wortman, Secretary
Wes Richardson, Treasurer

You may send an e-mail to any of the above individuals by sending to smewabash@yahoo.com and including the name of the person you wish to contact. Place SME Wabash Valley in the Subject line. Your e-mail will be forwarded to the indicated person.

James K. McNeely, Membership Consultant
Natalie Lowell, Member Relations Manager
Ronald P. Harrelson, Member Council Representative

Question of the Month

What do the following names have in common?

Society of Tool Engineers (STE)

American Society of Tool Engineers (ASTE).

American Society of Tool and Manufacturing Engineering (ASTME)

If you think you know the answer, send an e-mail to smewabash@yahoo.com. The first person with the correct answer will have their name listed in next month's newsletter.

The answer will be given next month.

The SME Wabash Valley Newsletter

newsletter is a publication of SME Wabash Valley, Chapter 275, located in Terre Haute, Indiana.

Articles, comments or other feedback may be sent to:

Wesley Richardson, Newsletter Editor
10037 E. Flesher Avenue
Terre Haute, IN 47803-9638
smewabash@yahoo.com

Information for the October newsletter must be submitted by September 25, 2006.

ASQ Quality Glossary

<http://www.asq.org/glossary>

A

Academic Quality Improvement Project (AQIP): A forum for institutions to review each other's action projects.

Acceptable quality level (AQL): In a continuing series of lots, a quality level that, for the purpose of sampling inspection, is the limit of satisfactory process average.

Acceptance number: The maximum number of defects or defectives allowable in a sampling lot for the lot to be acceptable.

Acceptance sampling: Inspection of a sample from a lot to decide whether to accept that lot. There are two types: attributes sampling and variables sampling. In attributes sampling, the presence or absence of a characteristic is noted in each of the units inspected. In variables sampling, the numerical magnitude of a characteristic is measured and recorded for each inspected unit; this involves reference to a continuous scale of some kind.

Acceptance sampling plan: A specific plan that indicates the sampling sizes and associated acceptance or nonacceptance criteria to be used. In attributes sampling, for example, there are single, double, multiple, sequential, chain and skip-lot sampling plans. In variables sampling, there are single, double and sequential sampling plans. (For detailed descriptions of these plans, see the standard *ANSI/ISO/ASQ A3534-2, Statistics—Vocabulary and Symbols—Statistical Quality Control*.)

Accreditation: Certification by a duly recognized body of the facilities, capability, objectivity, competence and integrity of an agency, service, or operational group or individual to provide the specific service or operation needed.

Accuracy: The characteristic of a measurement that tells how close an observed value is to a true value.

Action plan: A specific method or process to achieve the results called for by one or more objectives. May be a simpler version of a project plan.

Activity network diagram: An arrow diagram used in planning and managing processes and projects.

Advanced Product Quality Planning (APQP): Segment of QS-9000 process that uses tools to offer the opportunity to get ahead of problems and solve them before the problems affect the customer.

Affinity diagram: A management tool used to organize information (usually gathered during a brainstorming activity).

Alignment: The actions taken to ensure a process or activity supports the organization's strategy, goals and objectives.

American Association for Laboratory Accreditation (A2LA): An organization that formally recognizes another organization's competency to perform specific tests, types of tests or calibrations.

American Customer Satisfaction Index (ACSI): Released for the first time in October 1994, an economic indicator and cross industry measure of the satisfaction of U.S. household customers with the quality of the goods and services available to them—both those goods and services produced within the United States and those provided as imports from foreign firms that have substantial market shares or dollar sales. The ACSI is co-sponsored by the University of Michigan Business School, ASQ and the CFI Group.

American National Standards Institute (ANSI): ANSI is a private, nonprofit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. It is the United States' member body in the International Organization for Standardization, known as ISO.

American Society for Nondestructive Testing (ASNT): The world's largest technical society for nondestructive testing (NDT) professionals.

American Society for Quality (ASQ): A professional, not-for-profit association that develops, promotes and applies quality related information and technology for the private sector, government and academia. The Society serves more than 108,000 individuals and 1,100 corporate members in the United States and 108 other countries.

American Society for Quality Control (ASQC): Name of the Society from 1946 through the middle of 1997; then changed

to ASQ.

American Society for Testing and Materials

(ASTM): Not-for-profit organization that provides a forum for the development and publication of voluntary consensus standards for materials, products, systems and services.

American Society for Training and Development (ASTD):

A membership organization providing materials, education and support related to workplace learning and performance.

American standard code for information interchange (ASCII):

Basic computer characters accepted by all American machines and many foreign ones.

Analysis of means (ANOM):

A statistical procedure for troubleshooting industrial processes and analyzing the results of experimental designs with factors at fixed levels. It provides a graphical display of data. Ellis R. Ott developed the procedure in 1967 because he observed that nonstatisticians had difficulty understanding analysis of variance. Analysis of means is easier for quality practitioners to use because it is an extension of the control chart. In 1973, Edward G. Schilling further extended the concept, enabling analysis of means to be used with non-normal distributions and attributes data where the normal approximation to the binomial distribution does not apply. This is referred to as analysis of means for treatment effects.

Analysis of variance (ANOVA):

A basic statistical technique for analyzing experimental data. It subdivides the total variation of a data set into meaningful component parts associated with specific sources of variation in order to test a hypothesis on the parameters of the model or to estimate variance components. There are three models: fixed, random and mixed.

Appraisal cost:

The cost involved in ensuring an organization is continually striving to conform to customers' quality requirements.

Arrow diagram:

A planning tool to diagram a sequence of events or activities (nodes) and the interconnectivity of such nodes. It is used for scheduling and especially for determining the critical path through nodes.

AS9100:

An international quality management

standard for the aerospace industry published by the Society of Automotive Engineers; also published by other organizations worldwide, as EN9100 in Europe and JIS Q 9100 in Japan. The standard is controlled by the International Aerospace Quality Group (see listing).

Assessment: A systematic process of collecting and analyzing data to determine the current, historical or projected status of an organization.

Assignable cause: A name for the source of variation in a process that is not due to chance and therefore can be identified and eliminated. Also called "special cause."

Association for Quality and Participation

(AQP): Affiliate organization of the American Society for Quality (ASQ) dedicated to improving workplaces through quality and participation practices.

Attribute data: Go/no-go information. The control charts based on attribute data include percent chart, number of affected units chart, count chart, count per unit chart, quality score chart and demerit chart.

Attributes, method of: Measurement of quality by the method of attributes consists of noting the presence (or absence) of some characteristic (attribute) in each of the units under consideration and counting how many units do (or do not) possess it. Example: go/no-go gauging of a dimension.

Audit: The inspection and examination of a process or quality system to ensure compliance to requirements. An audit can apply to an entire organization or may be specific to a function, process or production step.

Automotive Industry Action Group (AIAG):

The originator and sole source of the QS-9000 series of standards. ASQ's Automotive Division maintains a liaison to this group.

Availability: The ability of a product to be in a state to perform its designated function under stated conditions at a given time.

Average chart: A control chart in which the subgroup average, X-bar, is used to evaluate the stability of the process level.

Average outgoing quality (AOQ): The expected average quality level of outgoing product for a given value of incoming product quality.

Average outgoing quality limit (AOQL): The maximum average outgoing quality over all possible levels of incoming quality for a given acceptance sampling plan and disposal specification.

Average run lengths (ARL): On a control chart, the number of subgroups expected to be inspected before a shift in magnitude takes place.

Average sample number (ASN): The average number of sample units inspected per lot in reaching decisions to accept or reject.

Average total inspection (ATI): The average number of units inspected per lot, including all units in rejected lots (applicable when the procedure calls for 100% inspection of rejected lots).

B

Baldrige Award: See "Malcolm Baldrige National Quality Award."

Baseline measurement: The beginning point, based on an evaluation of the output over a period of time, used to determine the process parameters prior to any improvement effort; the basis against which change is measured.

Benchmarking: An improvement process in which a company measures its performance against that of best in class companies, determines how those companies achieved their performance levels and uses the information to improve its own performance. The subjects that can be benchmarked include strategies, operations, processes and procedures.

Benefit-cost analysis: An examination of the relationship between the monetary cost of implementing an improvement and the monetary value of the benefits achieved by the improvement, both within the same time period.

Best practice: A superior method or innovative practice that contributes to the improved performance of an organization, usually recognized as "best" by other peer organizations.

Big Q, Little Q: A term used to contrast the difference between managing for quality in all business processes and products (big Q) and managing for quality in a limited capacity—traditionally only in factory products and processes (little q).

Black Belt (BB): Full-time team leader

responsible for implementing process improvement projects—define, measure, analyze, improve and control (DMAIC) or define, measure, analyze, design and verify (DMADV)—within the business to drive up customer satisfaction levels and business productivity.

Blemish: An imperfection severe enough to be noticed but that should not cause any real impairment with respect to intended normal or reasonably foreseeable use (see also "defect," "imperfection" and "nonconformity").

Block diagram: A diagram that shows the operation, interrelationships and interdependencies of components in a system. Boxes, or blocks (hence the name), represent the components; connecting lines between the blocks represent interfaces. There are two types of block diagrams: a functional block diagram, which shows a system's subsystems and lower level products and their interrelationships and which interfaces with other systems; and a reliability block diagram, which is similar to the functional block diagram except that it is modified to emphasize those aspects influencing reliability.

Board of Standards Review (BSR): An American National Standards Institute board responsible for the approval and withdrawal of American National Standards.

Body of knowledge (BOK): The prescribed aggregation of knowledge in a particular area an individual is expected to have mastered to be considered or certified as a practitioner.

Bottom line: The essential or salient point; the primary or most important consideration. Also, the line at the bottom of a financial report that shows the net profit or loss.