



**Society of Manufacturing Engineers
Wabash Valley Chapter C275**

June, 2007

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Upcoming Dates

June 30, Saturday, golf outing
and picnic, see page 2.

Sep. 13 Wabash meeting

Sep. 14-15 SME Leadership
Bootcamp, Columbus, Ohio

Oct. 11 Wabash meeting

Nov. 8 Wabash meeting

Dec. TBD Wabash meeting

GOLF OUTING & PICNIC

June 30, 2007 Saturday

Sign up today!

If you would like to play golf, come to the picnic, or both,
contact Wes or Bill at (812) 533-4215 or (800) 660-4215 or
asqwabash@yahoo.com Additional information is on page 2.



SME Wabash Valley C275 Meeting Schedule

June 30, 2007, Saturday

Golf outing and picnic at the Country Club of Terre Haute, 57 Allendale Street, Terre Haute, IN 47802

<http://thegolfcourses.net/golfcourses/IN/5226.htm>

There is a maximum of 20 people playing golf. Availability based on order in which reservations are received.

NOTE: The dress code is collared shirts. T-shirts and cut-offs are not allowed. This is a very nice private golf course.

8:00 AM Check-in. 8:30 AM Tee off with multiple groups starting at the same time. Play will be best ball in the group, with group members assigned by relative score of who plays.

1:00 to 1:30 PM Approximately start of picnic. People do not need to play golf in order to come to the picnic. Spouses invited.

Cost of golf will be \$30 each, including shared cart. Cost of picnic will be \$10 each. Costs are being supported by the ASQ, SME, and ASM groups, and Quality Council of Indiana. Reservations required by June 22, and indicate golf and picnic or picnic only.

Contact Wes or Bill at (812) 533-4215 or asqwabash@yahoo.com. Joint SME, ASM and ASQ meeting. Everyone welcome.

September 14 and 15, Friday and Saturday

SME Leadership Bootcamp, Columbus, Ohio

Notes from last month' meeting

13 people attended the May joint meeting of ASM Wabash Valley, ASQ Wabash Valley, and SME Wabash Valley. Dr. Zacharias Chambers is advisor for the GM Challenge X project. This is the third year for the Rose-Hulman Institute of Technology student team. They will be competing against other school teams, in several categories, including fuel economy, design, controls, and towing ability.

The students described some of the modifications they made, and problems they encountered. Everyone in attendance seemed to enjoy the visit. Dinner was at Logan's Ribeye Restaurant.

Photos from the meeting are on page 4.

SME Member Activity

If you know of a SME member that is in the Terre Haute area, but is not a Wabash Valley member, please ask them to consider joining Chapter C275.

Question of the Month

What is the difference between a black tie affair and a white tie affair?

If you think you know the answer, send an e-mail to asqwabash@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.

Answer for May's Question

Congratulations to Boice McCain who correctly answered:

What are the three most common crystalline structures or lattices of metals and many other solids?

Body centered cubic (BCC), face centered cubic (FCC), and hexagonal close packed (HCP).

http://www.ndt-ed.org/EducationResources/CommunityCollege/Materials/Structure/metallc_structures.htm

SME C275 Wabash Valley Officers for 2007

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

SME S089 Indiana State University Student Chapter Officers for 2007

Rakesh Yarlagadda, Chair
Ryan Kunkler, Chair Elect
Sajid Syed, Secretary
Kartheek Theeda, Treasurer
Surendranath Antharam,
Program Committee Chair
James Smallwood, Faculty Advisor

SME headquarters contacts for 2007

Natalie Lowell, Member Relations Manager
Michael F. Molnar, Member Council
Representative
F. Brian Holmes, SME President

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.

Internet Web Sites

Google has released a free, 3D drawing program called SketchUp 6. There is also a Pro version that is \$495.00. SketchUp is an easy to use drawing program that enables a person in a short time to be able to create three dimensional drawings. It has the ability to import graphics created by other people, and the ability to export to several graphic formats.

SME Wabash Valley, Chapter C275
<http://chapters.sme.org/c275/>

SME Indiana State University, Chapter S089
<http://chapters.sme.org/s089/>

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/c275/asm.htm>

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

Certification Corner

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

The SME Wabash Valley Newsletter newsletter is a publication of SME Wabash Valley, Chapter C275, located in Terre Haute, Indiana. Articles, comments or other feedback may be sent to:

Newsletter Editor smewabash@yahoo.com

Deadline for submitting information for the September newsletter is August 30, 2007.



Joint ASQ, ASM, SME meeting Challenge X at RHIT



Joint ASQ, ASM, SME meeting Challenge X at RHIT

ASQ Quality Glossary

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

t-test: Assesses whether the means of two groups are statistically different from each other. Use this analysis if you want to compare the means of two groups.

Type I error: An incorrect decision to reject something (such as a statistical hypothesis or a lot of products) when it is acceptable.

Type II error: An incorrect decision to accept something when it is unacceptable.

U

U chart: Count per unit chart.

Unit: An object on which a measurement or observation can be made. Note: Commonly used in the sense of a "unit of product," the entity of product inspected in order to determine whether it is defective or nondefective.

Upper control limit (UCL): Control limit for points above the central line in a control chart.

V

Validation: The act of confirming a product or service meets the requirements for which it was intended.

Validity: The ability of a feedback instrument to measure what it was intended to measure; also, the degree to which inferences derived from measurements are meaningful.

Value added: The parts of the process that add worth from the perspective of the external customer.

Value adding process: Activities that transform input into a customer usable output. The customer can be internal or external to the organization.

Values: The fundamental beliefs that drive organizational behavior and decision making.

Value stream: All activities, both value added and nonvalue added, required to bring a product from raw material state into the hands of the customer, bring a customer requirement from order to delivery and bring a design from concept to launch.

Value stream loops: Segments of a value stream with boundaries broken into loops are a way to divide future state implementation into manageable pieces.

Value stream manager: Person responsible

for creating a future state map and leading door-to-door implementation of the future state for a particular product family. Makes change happen across departmental and functional boundaries.

Value stream mapping: A pencil and paper tool used in two stages: 1. Follow a product's production path from beginning to end and draw a visual representation of every process in the material and information flows. 2. Then draw a future state map of how value should flow. The most important map is the future state map.

Variable data: Measurement information. Control charts based on variable data include average (X-bar) chart, range (R) chart, and sample standard deviation (s) chart.

Variation: A change in data, characteristic or function caused by one of four factors: special causes, common causes, tampering or structural variation (see individual entries).

Verification: The act of determining whether products and services conform to specific requirements.

Virtual team: Remotely situated individuals affiliated with a common organization, purpose or project who conduct their joint effort via electronic communication.

Vision: An overarching statement of the way an organization wants to be; an ideal state of being at a future point.

Vital few, useful many: A term used by Joseph M. Juran to describe his use of the Pareto principle, which he first defined in 1950. (The principal was used much earlier in economics and inventory control methodologies.) The principle suggests most effects come from relatively few causes; that is, 80% of the effects come from 20% of the possible causes. The 20% of the possible causes are referred to as the "vital few"; the remaining causes are referred to as the "useful many." When Juran first defined this principle, he referred to the remaining causes as the "trivial many," but realizing that no problems are trivial in quality assurance, he changed it to "useful many."

Voice of the customer: The expressed requirements and expectations of customers relative to products or services, as documented and disseminated to the members of the providing organization.

W

Waste: Any activity that consumes resources and produces no added value to the product or service a customer receives.

Weighed voting: A way to prioritize a list of issues, ideas or attributes by assigning points to each item based on its relative importance.

Wescott, Mason E.: ASQ founder and Honorary Member. A professor emeritus at the Rochester Institute of Technology (RIT), Wescott has been teaching mathematics and statistics since 1925. He has taught at Northwestern University, Rutgers University and RIT, where the Wescott Statistics Laboratory was dedicated in his honor in 1984. Wescott succeeded Martin A. Brumbaugh as the editor of Industrial Quality Control in 1947, a position he held until 1961.

Whisker: From box plot, displays minimum and maximum observations within 1.5 IQR (75th to 25th percentile span) from either 25th or 75th percentile. Outlier are those that fall outside of the 1.5 range.

Wilcoxon Mann-Whitney test: Used to test the null hypothesis that two populations have identical distribution functions against the alternative hypothesis that the two distribution functions differ only with respect to location (median), if at all. It does not require the assumption that the differences between the two samples are normally distributed. In many applications, it is used in place of the two sample t-test when the normality assumption is questionable. This test can also be applied when the observations in a sample of data are ranks, that is, ordinal data rather than direct measurements.

Work team: A team comprising members from one work unit. Also called a "natural team."

World-class quality: A term used to indicate a standard of excellence: best of the best.

X

X-bar chart: Average chart.

Y

Z

Zero defects: A performance standard and methodology developed by Philip B. Crosby that states if people commit themselves to watching details and avoiding errors, they can move closer to the goal of zero.

If you have a suggestion or request for information that you would like to see in this newsletter, please send an e-mail to smewabash@yahoo.com