



Mississippi Valley Chapter Newsletter

March 2009

<http://www.mississippivalleyashrae.org>

Monthly Newsletter

Important Dates

- **March 19, 2009**
Hydronics Seminar – All Day Event
- **March 31, 2009**
Student Scholarship Deadline
- **April 16, 2009**
1353-RP – Stability and Accurance of VAV Box Control and Flow
- **May 7-9, 2009**
Region VI Conference – Des Moines
- **May 21, 2009**
Chapter Meeting - Elections
- **June 5, 2009**
Golf Outing

The Amazing Hydronics Seminer

John Siegenthaler, P.E..

The speaker will be John Siegenthaler, founder of Appropriate Designs a company which was formed in 1983 to provide engineering design services specifically focused on low-energy-use buildings.

Appropriate Designs is a team of engineering professionals dedicated to advancing the science and proper application of modern hydronic (waterbased) heating. They are specialists in the application of engineering principles, computer aided design, technical writing, and teaching. They integrate these capabilities as necessary to continually develop new support materials for the hydronics industry.

Program:

The program is a technical, full-day seminar covering multiple hydronic topics, reinforced with schematics, photos, and relevant formulas.

A manual covering all topics will be provided either in paper format, on a CD or flash drive.

Topics include:

Application & Piping of Multiple Modulating Boilers
Hydraulic Separation – Beyond Primary/Secondary Piping
Distribution Efficiency & the Future of Hydronic Circulators
Integrating Active Solar Into Hydronic Heating Systems – The Latest Approaches
Hydronic Approaches to High Capacity Domestic Water Heating
Mini-tube Distribution Systems for Large Radiant / Snow Melting Applications

March 19th Program

Location: The SteepleGate Inn
Symposium Room
100 W 76th St
Davenport, IA

Program: TIME: 7:30 a.m.-4:00 p.m.
COST: \$190 until 12 Mar 09
\$210 at the door
Students \$30

Fee includes:

Lunch & 2 breaks with refreshments.
Pertinent pages Manuals
Eligibility for 7 Professional
Development Credit Hours (PDH) for
engineers — and 7.5 LU/HSW units
for architects.



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ASHRAE News

Building Energy Labeling Program Announced

A proposed building energy labeling program was announced by ASHRAE President Bill Harrison at the Society's 2009 Winter Conference. More than 2,800 people attended the Winter Conference, held Jan. 24–28 in Chicago. Also taking place in conjunction with the meeting was the Air-Conditioning, Heating, Refrigerating Exposition (AHR Expo), which attracted more than 54,000 registered visitors and exhibitor personnel.

<http://www.ashrae.org/pressroom/detail/17030>

46 Members Honored

ASHRAE recognized 46 people for their contributions to ASHRAE and the HVAC&R industry at the 2009 ASHRAE Winter Conference in Chicago. Among the honorees were 22 members who were elevated to Fellow ASHRAE. Other awards recognized achievement in community service, design, engineering education and promotion of the Society.

<http://www.ashrae.org/publications/detail/17032>

New Interpretations to Key ASHRAE Standards

New interpretations to ASHRAE Standards 90.1-2004, 62.1-2004 and 135-2004 have been issued by the standards' respective Standing Standard Project Committees (SSPCs). New interpretations clarify or define wording and content within standards. The new interpretations are part of a group of Standards Actions published Feb. 6.

http://www.ashrae.org/doclib/20090206_SAfeb062009.pdf

ASHRAE Publishes Load Calculations Manual

A new book from ASHRAE contains guidance on use of load calculations to help designers improve the performance and efficiency of their designs. *Load Calculation Applications Manual* focuses on two methods for calculating cooling loads in nonresidential buildings—the heat balance method and the radiant time series method. The book has an accompanying CD that contains spreadsheets to compute factors and cooling loads.

<http://www.ashrae.org/pressroom/detail/17046>

ASHRAE Updates Guide for Buildings in Hot and Humid Climates

The ASHRAE Guide for Buildings in Hot and Humid Climates has been expanded and revised for its second edition. It includes four new chapters providing guidance on reducing energy consumption and mold risk, and lowering the cost of mechanical systems. Other new chapters cover quantifying and reducing cooling and dehumidification loads, and designing more economical ventilation systems. In all, the guide was expanded from 124 to 316 pages.

<http://www.ashrae.org/pressroom/detail/17048>

Digital Journal

http://www.nxtbook.com/nxtbooks/ashrae/ashraejournal_200902/

Digital Insights

http://www.nxtbook.com/nxtbooks/ashrae/ashraeinsights_200902/index.php

Industry News

Study Links Health, Building Temperatures

BERKELEY, Calif.—Research by the U.S. Department of Energy's (DOE) Lawrence Berkeley National Laboratory suggests that operating buildings more efficiently could benefit the health of occupants. The study of 95 buildings showed that occupants had significantly more health complaints when the building was overheated or overcooled. In summer, building-related health symptoms increased by more than 50% in the buildings kept below 73.4°F (23°C). In winter, buildings heated above that temperature were associated with approximately 30% to 80% more building-related symptoms. The study has been published online in the journal *Indoor Air*.

<http://newscenter.lbl.gov/press-releases/2009/02/17/cooling-heating-health/>

Stimulus Law to Benefit Energy Projects

LOS ANGELES—The newly signed economic stimulus package will invest nearly \$79 billion in renewable energy, energy efficiency and "green" transportation. Provisions include \$4.5 billion for energy upgrades to federal buildings, \$4.5 billion in federal matching funds to upgrade the U.S. energy grid and \$5 billion to weatherize residences.

<http://www.latimes.com/business/la-fi-stimulus-green18-2009feb18,0,5194715.story>

Plan Would Create 'Solar Energy Colony' in Arizona

NEW YORK—A group of western states' governors and the federal government are studying a plan to make Arizona a solar-energy "colony" for 11 other states, two Canadian provinces and Baja California. Under the plan, large-scale solar-power plants would be built across the Sonoran Desert, with power lines up to 300 ft (91 m) high. A square mile of desert covered with solar panels could furnish about 100 MW of power, says the Western Governors Association, whose \$1 million study is funded by the U.S. Department of Energy.

<http://www.bdcnetwork.com/articleXml/LN927729394.html?nid=2073>

U.S. Tops in World for Wind Power Installation Capacity

BRUSSELS, Belgium—The United States has passed Germany to become the country with the most wind power capacity, according to the Global Wind Energy Council (GWEC). New U.S. wind energy installations in 2008 were more than 8,000 MW combined, for a total installed capacity of more than 25,000 MW. China remains the fastest-growing location for wind power. Its total capacity doubled for the fourth year in a row. The global market for wind turbine installations in 2008 was about \$47.5 billion.

http://www.gwec.net/index.php?id=30&no_cache=1&tx_ttnews%5Btt_news%5D=177&tx_ttnews%5BbackPid%5D=4&cHash=3a1c08c3ac

Study Finds Link Between Humidity Levels, Flu Transmission

CORVALLIS, Ore.—Flu viruses survive longer and are more easily transmitted when humidity levels are low, such as in the peak flu months of January and February, Oregon State University researchers found in a new study. In the study, the OSU team reanalyzed data from a 2007 Mount Sinai School of Medicine study that identified a weak relationship between flu transmission and relative humidity. The reanalysis revealed a strong link between absolute humidity and flu virus survival and transmission. "The correlations were surprisingly strong. When absolute humidity is low, influenza virus survival is prolonged, and transmission rates go up," said study author Jeffrey Shaman. The report is published in this week's issue of the *Proceedings of the National Academy of Sciences*.

<http://health.usnews.com/articles/health/healthday/2009/02/10/low-humidity-levels-help-flu-germs-spread.html>

Northern Ireland Official Bans Climate Change Ads

DUBLIN, Ireland—Northern Ireland's environment minister announced Monday he has banned British government TV ads on climate change and denounced their energy-saving message as "insidious propaganda." His act is in opposition to the United Kingdom's central government in London, which funds an "Act on CO₂" campaign encouraging citizens to reduce use of electricity and fossil fuels. Sammy Wilson said the television ads, which have run throughout the UK for the past year, are "giving people the impression that by turning off the standby light on their TV, they could save the world from melting glaciers and being submerged in 40 ft of water."

<http://www.google.com/hostednews/ap/article/ALeqM5gLGWEN2UDT8NdPesYuBZo299PjDQD96887900>

Students Not Considering Engineering, and Parents Not Pushing Them

MILWAUKEE—More than 85% of students under 18 are not considering careers in engineering, a new survey found. The online survey, commissioned by the American Society for Quality, also found that only 20% of parents have encouraged or will encourage their children to consider an engineering career. Nearly half of responding students said they "don't know much about engineering."

<http://www.asq.org/media-room/press-releases/2009/20090122-engineering-image.html>



Spring 2009 Online Courses



LIVE INSTRUCTOR • LEARN AT YOUR COMPUTER • LIMITED CLASS SIZE • REAL-TIME INSTRUCTORS

Register Early and Save!

Register by March 6th

\$154 ASHRAE Member / \$214 Non-member

After March 6th

\$169 ASHRAE Member / \$236 Non-member

2 Ways to Register

1. Internet:

<http://www.ashrae.org/onlinecourses>

2. Phone:

Call toll-free at 1-800-527-4723 (US and Canada) or 404-636-8400 (worldwide)

NOTE: You may register up to 48 hours prior to an online course. Course times are in Eastern US Time Zone.

Earn 3 PDHs/AIA LUs or .3 CEUs

(Expect for Leadership Skills for Engineering Leaders)

Desiccant Dehumidification Systems

Instructor: Mark Nunnelly

Monday, March 23, 2009

1:00 p.m. to 4:00 p.m. edt

Desiccant systems for dehumidification in commercial buildings have been upgraded to increase reliability and reduce costs. These new systems are described in this course, which also reviews the fundamentals of desiccant technology. In addition, students will learn about equipment performance from computer modeling and practical, field-based perspectives; how to calculate moisture loads; how to select the proper instrumentation and controls; and how to commission and maintain equipment.

Complying with Standard 90.1-2007 HVAC/Mechanical

Instructor: Mack Wallace

Wednesday, March 25, 2009

1:00 p.m. to 4:00 p.m. edt

This course presents the HVAC/mechanical sections and methods of compliance from ANSI/ASHRAE/IESNA Standard 90.1-2007. Standard 90.1 is the benchmark for commercial building energy codes in the United States and in countries around the world. Many states are currently in the process of adopting elements of the Standard. The U.S. Department of Energy is also reviewing it in preparation for adoption as the new benchmark for state energy codes. This course presents an overview of the Standard and describes changes to the 2004 mechanical section that are part of the 2007 Standard. Design professionals, code officials and building owners will benefit from this seminar. Attendees will receive a discount toward the purchase of *Standard 90.1-2007, Energy-Efficient Design of Low-Rise Residential Buildings*.

Complying with Standard 90.1-2007 Envelope/Lighting

Instructor: Joe Deringer

Wednesday, April 1, 2009

1:00 p.m. to 4:00 p.m. edt

This course provides an overview of the latest developments in Standard 90.1 and emphasizes the envelope, lighting, and HVAC topics. Course topics include: envelope compliance; HVAC/SWH compliance; lighting compliance; power and other equipment compliance; and ECB compliance.

Determining Energy Savings from Performance Contracting Projects

Instructor: Mark Stetz

Monday, April 6, 2009

1:00 p.m. to 4:00 p.m. edt

This course provides an overview of measurement and verification (M&V) procedures and methods for determining savings from energy efficiency projects. Four brief case studies will be presented to illustrate concepts and issues associated with M&V: a lighting project (using both estimates and long-term metering), a VSD project (using long-term metering), a billing analysis and a calibrated simulation.

Exceeding the Requirements of Standard 90.1-2007

Instructor: Mack Wallace and Joe Deringer

Wednesday, April 8, 2009

1:00 p.m. to 4:00 p.m. edt

This course explains Appendix G, a new informative appendix in 90.1 since 2004, provides specific guidance on the rules and procedures to use to simulate building energy used when the objective is to substantially exceed the requirements of 90.1. Appendix G is especially useful for energy simulations connected with LEED credits and with energy tax credit. Attendees will receive a discount toward Standard 90.1-2007.

Complying with Requirements of ASHRAE Standard 62.1-2007

Instructor: Hoy Bohanon

Thursday, April 9, 2009
1:00 p.m. to 4:00 p.m. edt

ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, contained many changes from its previous versions. The newest version of the standard was published in June 2007. This course provides an overview of the requirements of the new standard with emphasis on changes from the previous version. Practice in using of an available spreadsheet will be included as a closing exercise. Attendees will receive a discount toward Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality and Standard 62.1-2007 Users Manual.

Leadership Skills for Engineering Leaders: Situational Leadership

Instructor: Barry Benator

Tuesday, April 14, 2009
1:00 p.m. to 4:00 p.m. edt

This course provides the engineering leader with proven leadership skills and competencies that will help him or her be more effective back on the job. Taught by an engineer who has led and managed more than 100 engineering projects, the course is based on proven, practical leadership skills that lead to success in an engineering environment. A confidential leadership style assessment will be provided to each participant to help him or her apply the most effective leadership style in typical work situations.

Life Cycle Costing (LCC) Analysis

Instructor: Mark Stetz

Thursday, April 16, 2009
1:00 p.m. to 4:00 p.m. edt

Life-cycle cost analysis provides building professionals with the tools needed to compare and choose the best economic alternative when evaluating project alternatives with different first-costs and long-term operating costs. This course will describe life-cycle cost analysis methods, review discounting of cash flows, and discuss the effects of inflation and the use of supplemental economic indicators. The new Windows-based Building Life-Cycle Cost (BLCC-5) analysis software developed by the NIST will be demonstrated. Other analysis tools will also be discussed.

Understanding & Designing Dedicated Outdoor Air Systems

Instructor: Stanley Mumma

Monday, April 20, 2009
1:00 p.m. to 4:00 p.m. edt

This course presents some of the issues that emphasize the advantages of separate dedicated outdoor air systems (DOAS) and the disadvantages of delivering the ventilation via single all-air variable air volume systems. This course discusses the parallel terminal systems available, the inherent problems with VAV systems, DOAS automatic control design and operational issues in a campus building, the energy savings potential of the top HVAC technologies, and the engineering design score sheet for a DOAS project.

MasterFormat 2004 for HVAC Specifications

Instructors: Charles Gulledge & Mike King

Monday, April 27, 2009
1:00 p.m. to 4:00 p.m. edt

This course is produced by the Construction Specifications Institute and is the master list of numbers and titles classified by work results or construction practices that the construction industry relies on to organize project manuals, to organize detailed cost information, and to relate drawing notations to specification. This course explores the structure and numbering changes in MasterFormat from the 1995 to the 2004 version, shows where HVAC-related specification content should be located, explores how customization can be

applied, and discusses provisions for future standard updates and maintenance.

Natural Ventilation

Instructor: Frank Mills

Monday, May 4, 2009

1:00 p.m. to 4:00 p.m. edt

This course explains the various methods by which natural ventilation can be achieved including successful examples of these methods and implementation. It also describes calculation techniques with working examples ranging from simple manual calculations and spreadsheets to more sophisticated techniques such as computational fluid dynamics (CFD), salt bath modeling, and physical (scale) model testing. The course follows the CIBSE Applications Manual AM10, Natural Ventilation in Non-Domestic Buildings. Attendees will receive a discount toward the purchase of Natural Ventilation in Non-Domestic Buildings.

The Commissioning Process & Guideline 0

Instructor: Walter Grondzik

Wednesday, May 6, 2009

1:00 p.m. to 4:00 p.m. edt

This course targets building owners, facility managers, design engineers, building designers, architects, equipment manufacturers, and others interested in the commissioning process as outlined in Guideline 0. The course focuses on process intent, activities, and deliverables. It is intended as an entry-level course that will provide attendees with a fundamental background of the ASHRAE-promoted commissioning process.

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Check-out the Updated Chapter

Website at:

www.mississippivalleyashrae.org



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