



BLACK HILLS ASHRAE CHAPTER

Technology for a Better Environment

President

Michael Heinrich

Vice President and Secretary

Mike Mueller

Treasurer

Judy Oakley

Membership

Dave Riemenschneider

Resource Promotion

Chad Miller

Technology Transfer

Allen Freeland

Student Activities

Mike Malone

Historian

Dave Berg

Newsletter

Editor/Webmaster

David Dowling

Program:

10th Annual Electro-Technology Expo

Thursday, January 14, 2010

The Ramkota Best Western Inn - Rapid City, SD

10:00am-9:00pm

This month we will not have a regular meeting; instead you are all invited to this all electric event for builders, developers, realtors, electrical contractors, HVAC professionals, engineers and architects. In addition to several workshops, there will be exhibits featuring cutting edge energy efficiency products and technology.

*Please see the flyer with this newsletter for more information and registration fees. Additionally there will not be a meeting for this month.

President's Message

Happy New Year.....I think. I was reading the December ASHRAE Insight last week, specifically the Standard 189.1 article. In the article, they were discussing the 90.1-2010 that will be released later this year. The goal of the writers is to have the base case of the 90.1-2010 standard be 30% better than the 2004 version. Think I scared half the office with my HOLY COW BATMAN statement. I consider this a good push, but just hope that ASHRAE isn't getting too aggressive in their energy pursuit. What do I know though.

ASHRAE really is trying to be a leader when it comes to building energy reduction. Standard 189.1 will attempt to consolidate all of the various ASHRAE standards into a document that can be made into a code. Their hope is to keep the credit on ASHRAE and the other various organizations rather than having a code council use our data to make a code and strip out all of the engineering behind the document. Anyone guess what I'm talking about??

Well, this month we won't be having an official meeting since it is the Electro Technology Expo. Several of the programs look very interesting. Hope to see you all there!!

Michael

Upcoming Events

Make plans now to attend the ASHRAE 2010 Winter Conference January 23-27, Orlando, Florida. This year's theme will be "Building Sustainability from the Inside Out." Obtain more information for the ASHRAE 2010 Winter Conference at www.ashrae.org.

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A N I N T E R N A T I O N A L O R G A N I Z A T I O N



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Chapter Programs Schedule

Below is a listing of this year's programs. If anyone has any suggestions for programs, please call or email me below:

January 14, 2010	10 th Annual Electro – Technology Expo	Multiple
February 18, 2010	Air to Air Heat Exchanger	Russell Ryan
March 18, 2010	Solar Thermal	Tim Teeslink
April 15, 2010	Noise Controls	Jerry Sipes
May 20, 2010	The Ethics and Economics of Energy	William Coad, DL
Send program suggestions to:	Allen Freeland (P) 737-3800 (F) 737-3859 programs@blackhillsashrae.org	

Research Promotion

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2010 Electro^{Technology} Expo

January 14, 2010 Ramkota Best Western Inn Rapid City, South Dakota

Mark The Date! Thursday, Jan. 14, 2010

Looking for a way to stay plugged in with the changing energy landscape? Then come to the 10th annual Electro Technology Expo. The 2010 Expo will have exhibits featuring cutting edge energy efficiency products and technology. Plus, you will have the opportunity to attend workshops given throughout the day by leading industry and technology experts covering a variety of topics, including:

- LED Street Lighting
- Updates on Wind Energy Interconnection Standards
- Line Service & Extension Standards
- South Dakota Electrical Code Classes
- Geothermal Systems & Thermal Conductivity Testing
- Heat Pump Water Heaters
- Smart Meter Case Studies
- Color Rendering with New Lighting Systems
- ENERGY STAR Home Performance Audits
- Updates on LEED Building Standards
- Advances in In-Floor Heating Systems
- Renewable Energy Applications & Success Stories

Only \$25 to attend!

SAVE \$5 – Preregister after Dec. 1 at www.blackhillspower.com and get \$5 off the attendance price.

Keynote Speaker

Dusty Johnson, Chairman, South Dakota Public Utilities Commission

Expo Schedule

Thursday, Jan. 14, 2010

- 8:00 a.m. – Doors open for check-in and exhibits open
- 10:00 a.m. to 6:00 p.m. – Presentation sessions
- 11:30 a.m. to 1 p.m. – Lunch, Keynote Speaker and Exhibitor Showcase
- 6:00 p.m. to 9:00 p.m. – BHHBA Monthly Membership Mixer & Dinner Meeting

Special Event

Black Hills Home Builders Association Monthly Membership Mixer & Dinner Meeting

- Mixer begins at 6 p.m. with dinner to follow at 7 p.m.
- Tickets are \$15.00 each.
- The deadline to register for the BHHBA Mixer & Dinner is Tuesday, Jan. 12. To register, e-mail Lindsay Willits at lwillits@blackhillshomebuilders.com or call 605.348.7850.

For more information about the Electro Technology Expo, contact Jeff Easton by e-mail at jeff.easton@blackhillscorp.com.

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Program:

Air to Air Heat Exchanger

Thursday, February 18, 2010

SDSM&T Surbeck Center Hisega Room – Rapid City, SD

12:15pm-1:15pm

Board of Governors Meeting to follow

Russell Ryan is a Sales Engineer for Innovent Air Handling Equipment located in Minneapolis, MN. He has been involved with custom design and selection of HVAC equipment incorporating efficient design concepts such as air-to-air energy recovery, improving IAQ in natatoriums, and high-efficiency fan selection for sound sensitive environments. His involvement in custom equipment design has varied from submittal engineer, application engineer, and is currently in the role of sales engineer. Russell holds the following degrees: Bachelor of Science in Mechanical Engineering and is currently pursuing his Masters of Business Administration, both from the University of Minnesota.

Abstract:

As manufacturers of custom equipment, the increasing trends are demanding designs to include energy efficient concepts such as energy recovery as a means to reduce the overall energy consumption by equipment. Energy recovery devices are not new, but there are various technologies that are available as a means to reduce the overall cooling and heating capacity within a system. Russell will discuss the various device nuances and the applications of each in conjunction with the associated benefits of their respective technologies and some of the drawbacks that each present. The various technologies to be discussed are flat plates, energy wheel, heat pipes, and run around loops.

President's Message

It's all downhill from now on. Spring is on its way. That also means it is about time for Mike Mueller to start begging people for positions under his presidency. This is a volunteer organization, so do so if you are able and willing.

Engineer's Week is coming up, February 14 through February 20. Looks as if the school has brought back the Rube Goldberg contest and it looks like we are sponsoring it again. The school stopped doing it a year or two ago because of participation being too low.

The rest of our programs look interesting. May's will be a distinguished lecturer and former ASHRAE president. Hope everyone can attend.

I haven't gotten everything done that I wanted to as President, but we did get a few things activated. Still am going to be pressing to get our website more user friendly and get more of our history on it. I wish I had more of our newsletters, but the ones from the mid 80's seem to be lost for good. Did find several company profiles and profiles of people going through Jerry's stuff. Quite interesting. A good quantity of it is on the website, so go check it out.

Rich Rose, Region IX DRC, will be doing a chapter visit this month. He should be able to give us some insight on what is going on at ASHRAE headquarters. This also means we will be having a Board of Governors meeting after our regular meeting to go over some of our chapter operation items. I've been pretty slack on that as of recently.

Well, time to get back to work. See you all on February 18th!
Michael

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Program:

Hi-PICS Lunch-N-Learn

Thursday, March 11, 2010

SDSM&T Campus, Surbeck Center – Rapid City, SD

11:30 AM - 12:00 PM – Check-In, Networking, and Lunch

12:00 PM – 1:00 PM – Presentation and Q&A

Economic development is important to the local economy and it benefits everyone. Part of developing new businesses and expanding existing ones is community support. Come learn how the School of Mines High Plains Center for Product Innovation, Commercialization and Support (Hi-PICS) will be supporting local businesses, helping businesses grow, innovating new ideas, improving quality, and saving money through student and faculty programs. Dr. Jensen will give case studies including how a student project saved a local company over \$400K.

Businesses can work with the School of Mines in the following areas including:

- Student project work and design work
- Student Internships
- Faculty involvement and consulting
- Research projects
- Continuing education and training

Please join Dr. Dean Jensen, Assistant Professor of Industrial Engineering, to learn more about this new venture for SDSM&T.

To register, please visit http://www.hpcnet.org/learn/adult/hi_pics or call 605-394-2692.

Preregistration is required, cost is \$15 per person and the Black Hills ASHRAE Chapter has offered to pay student member's entrance fee.

President's Message

Well, only three more programs left in the year and in my presidency. I also officially lose my YEA status this month, meaning that I will now be an OLD engineer in ASHRAE. They need an intermediate step. It is too sudden and final!

We are currently having our website revamped as it is an older style of web programming. I receive so much interesting information from ASHRAE national, but have no way of spreading the news easily. Also, our current photo section is a pain to update. As soon as the website is upgraded and operational, we'll get more of our information posted. I can't even explain the amount we have.

One of the Rube Goldberg competitors was insane! I've posted a photo of it below. As pretty as theirs was, theirs required human intervention whereas one of the tech teams didn't on any of their runs. Tech didn't need flash, just for what it is supposed to. And yes, I'm biased. We aren't a bunch of architects!

Programs this year has been tough. Our speaker for this month backed out, so we went with the option of using SDSMT's monthly meeting to do it. We do have the last two meetings of the year pinned down, so that is good.

Thanks to Rich Rose, our DRC, for coming down last month. We were able to get a lot of good information about ASHRAE. Well, back to the grind.

Michael

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Program:

Noise Controls

Thursday, April 15, 2010

SDSM&T Campus, Surbeck Center Hisega Room – Rapid City, SD

12:00 PM - 1:00 PM

Our speaker for this month's meeting is Patrick Oliver, M.SC, P. Eng. Senior Noise Control Engineer.

Patrick Oliver has over 8 years of experience in designing and selecting noise control equipment. He has developed software to optimize the selection and design of fan silencer systems, developed industrial silencers for "dirty" airflow applications, and been involved in many custom applications of noise control products for a number of diverse industries. Patrick is a registered professional engineer with post graduate education in noise control engineering.

President's Message

Many years ago, I was watching a panel discussion about diamonds. The facilitator, who was male, was generating the question about why Americans are so intrigued with diamonds as they aren't a rare stone, are inflated in value by De Beers (who controls the world diamond market, but is considered a monopoly by the US government and cannot directly do business in the US, although everything done in the world is affected by them), and the serious issues atrocities committed to children by the removal of limbs, etc. One of the panelists, female, argued that facilitator couldn't know where diamonds come from and that he was blaming all diamonds for the atrocities to children. Long story long, at the end, the facilitator finally told the panelist to just say she liked diamonds and that there was no point in trying to justify it. Every time I design a LEED or "green" building, I am reminded of this.

I was looking through a green magazine a while back and saw an article on an Architect's "green" house. It is located in the Rockies or some other cold environment. It is green because it has infloor heat, so it only has to heat the occupied space. All I saw was the entirely glass exterior with tall walls. Still being a Padawan, Obi-Wan Kenobi recently told me that we still need pretty buildings. Although still grumbling about it, I agree. I wish people would just admit the consequences for things being ultra pretty, or make the compromise between the two.

Michael

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Technology for a Better Environment



**"Right from the Start
Commissioning for High Performing Buildings"**

ASHRAE Webcast



**Wednesday, April 21, 2010
1-4 p.m. EDT**

Hear from leading commissioning experts about how commissioning supports a smoother construction process, maximizes energy and cost reductions, and provides a facility that operates as intended. This program will define the "what, why, when, and who" of the commissioning process and provide you with tools to commission your high performing building.

This **free** webcast is sponsored by the ASHRAE Chapter Technology Transfer Committee with support from ASHRAE's High Performing Buildings Magazine, and has been approved by **AIA** and the **USGBC**.

How to Participate

- You may host a webcast site for your colleagues.
- You may register to view with others at a site near you.
- You may register to view the Webcast on your PC.

How to Earn Credits for Continuing Education, License Renewal or Certification

Three (3) Professional Development Hours or three (3) AIA Learning Units may be awarded to viewers who complete the **"Participant Reaction Form"** online by **April 30, 2010**. Visit www.ashrae.org/CxWebcast for complete details.

- About the Presenters
- Richard Casault
 - H. Jay Enck
 - Ronald Wilkinson

Visit www.ashrae.org/CxWebcast for complete details.

Registration

Online registration begins now at www.ashrae.org/CxWebcast. **There is no fee for registration.** If you have questions, call **678-539-1200** or email ashrae-webcast@ashrae.org.

To learn about ASHRAE membership, visit www.ashrae.org/membership.



ASHRAE is located at 1791 Tullie Circle, NE, Atlanta, GA, USA 30329

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Program:

The Ethics and Economics of Energy Conservation

Thursday, May 20, 2010

SDSM&T Campus, Surbeck Center Bump Loung – Rapid City, SD

12:00 PM - 1:00 PM

William J. Coad, President of Coad Engineering Enterprises is a consulting principal and past Chairman and CEO of McClure Engineering Associates, and past President of ASHRAE. He received his degree in Mechanical Engineering from Washington University in 1957, and is a registered professional engineer in 37 states. He is a member of the Board of Directors of Mestek Corporation of Pittsburgh, Pennsylvania, Exergen Corporation of Watertown, Massachusetts and HBS Acquisition Corporation of Delaware. In the field of Engineering Education, he served as a lecturer in Mechanical Engineering (undergraduate level) for 12 years at Washington University in St. Louis, and for 17 years as an Affiliate Professor teaching graduate courses in Mechanical Engineering and serving as a student thesis advisor in building environmental systems design.

Mr. Coad is a member of the Consulting Engineer's Council, the American Society of Mechanical Engineers (ASME) and a Fellow in the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). He is a recipient of ASHRAE's Distinguished and Outstanding Service Awards, the Crosby Field Award for the best paper published by ASHRAE in 1985, the Louise & Bill Holladay Distinguished Fellow Award, the award for Best Journal Article of 1991, the Andrew T. Boggs Service Award and ASHRAE's highest award for technical achievement, the F. Paul Anderson Award. He is a recipient of the Washington University Alumni Achievement Award, and the Donald Julius Groen Prize of the British Institute of Mechanical Engineers. He has published 2 books and numerous articles and papers in United States and Foreign Journals on topics related to various aspects of Engineering Philosophy and Building Environmental Systems.

The Ethics and the Economics of Energy Conservation – This talk explores the economics of energy conservation and the failure of economic alternatives in the search for more energy conservative buildings and machines. Then, based upon this observation an alternative perspective leads to the conclusion that energy conservation is an ethic, and if this ethic is embraced by those who practice in the energy sciences, the inevitable result will be improved system performance, energy conservation and improved economics.

Sponsor a Student Member

During last month's chapter meeting, several companies indicated that they would be interested in sponsoring a student member. With this being said, the Black Hills ASHRAE Chapter would like to invite other companies to sponsor a student member to help the South Dakota School of Mines and Technology's ASHRAE Student Chapter prosper as a student organization. If your company would like to sponsor a student member contact Mike Malone at studentactivities@blackhillsashrae.org.

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President's Message

I was at the Plain Green 2010 last week listening to a presentation on ASHRAE Standard 189.1. During the question and answer part, an architect asked why they should care about this standard, in lieu of LEED or some other method. The presenter indicated the standard is codifiable, and most likely will be adopted by several jurisdictions. The gentleman really didn't seem too impressed by ASHRAE. The incoming president to AIA got the presenters information, though, as he saw it was going to hit several people between the eyes.

At first, I was slightly irritated that the Architects didn't care too much about 189.1 and 90.1 as they are 1/3 of the standards. Most Architects probably don't even know they exist. I'd like to blame them, but I can't, as it is really our fault for not bringing it to their attention earlier. I recently finished the design on a LEED project and have been going through the documentation. In lieu of doing the 90.1 envelope compliance checks myself, which had been the case previously (actually, I made David do it), I had requested the Architect to do it. Although I really harped on the Architect to look into it during design, it took actually doing the documentation for him to realize that he was barely compliant on the building. After going through 90.1 myself for the HVAC part and realizing all of the minor mistakes I had been making, I can understand the slap in the face that he most likely had.

After all of this, I was thinking I should suggest Mike Mueller put through a couple motions to try and get AIA to get Architects more on board, but then I realized that I don't even know who the local AIA representative is. Heck, I don't even know who the local head of the SDEC is, and I work across the building from several members. Being in a grass roots organization, I think I was temporarily looking in the wrong direction in how to deal with this; as such, I am attempting to contact AIA to get the information out.

Michael

Douglas Wind for Schools Update

Since the installation in January 2009, the Skystream Wind Turbine, that is spinning quite regularly south of Douglas High School, is the top producer of all Wind for Schools (WfS) windmills. The average daily output of this turbine is almost ten kWh's per day. The second place wind turbine is located in Greenbush, Kansas. This cooperative project with Black Hills Power and Light's investment and funding from Iberdrola Renewables will provide a long term source of data and educational benefit for years to come. The data for all WfS turbines can be found at:

<http://wac.sdwind.org/wfs/data>.

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ASHRAE – API
SIGN UP FOR YOUR
25th ANNUAL GOLF OUTING & FUND RAISING
"GOLF RETIREMENT SPECIAL"

July 22, 2010



Elks Golf Course
Rapid City, South Dakota

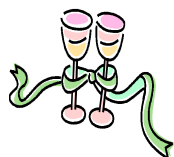


"BEST BALL SCRAMBLE"

2 Drives per Player

Per Nine Holes

Tee-Off - 7 a.m. to 12:00 p.m.



SILVER ANNIVERSARY



**\$70 Entry Fee – Includes green fees, cart rental,
Refreshments on course, dinner for one**

Location: Elks Supper Club – Lower Level

Social Hour: 5:00 p.m.

Awards and Dinner: 6:00 p.m.

Dinner Choices: Steak or Chicken w/trimmings

Additional Dinners: \$20 (wife, friends welcome)

NO LAST MINUTE CHANGES!

Send confirmation, checks, foursome and requested starting time(s) to:

Tim Elliott
Balancing Professionals, Inc.
1221 Concourse Drive
Rapid City, SD 57703
(605) 348-8298
(605) 348-9215 (Fax)
telliott@oconnorcorc.com

Mike Erhart
API
5008 API Road
Black Hawk, SD 57718
(605) 787-6781
(605) 787-4017 (Fax)
mike.erhart@apidistribution.us

PRIZES & DONATIONS NEEDED

Proud Hole Sponsors (\$50.00)

Thank you to all the previous sponsors – We again met our scholarship goal!

ASHRAE Learning Institute Spring 2010 Online Course Series

2 WAYS TO REGISTER

Internet: www.ashrae.org/onlinecourses

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

Note: You may register up to 24 hours prior to an online seminar.
Courses are in US Eastern Standard Time.



Courses in May

District Cooling & Heating Systems: Central Plants
Monday, May 3, 2010 – 1:00 p.m. to 4:00 p.m. EDT

Complying with Requirements of ASHRAE Standard 62.1-2007
Wednesday, May 5, 2010 – 1:00 p.m. to 4:00 p.m. EDT

Understanding & Designing Dedicated Outside Air Systems (DOAS)
Monday, May 10, 2010 – 1:00 p.m. to 4:00 p.m. EDT



Standard 189.1 Training

The ASHRAE Learning Institute (ALI) is bringing *Standard 189.1-2009* training to a city near you.

Understanding Standard 189.1-2009 for High-Performance Green Buildings
May 25, 2010 – 1:30pm – 4:30pm, San Francisco, CA

Understanding Standard 189.1-2009 for High-Performance Green Buildings
June 2, 2010 – 1:00pm – 4:00pm, Arlington, TX

Implementing Standard 189.1-2009 for High-Performance Green Buildings
June 10, 2010 – 8:00am – 4:00pm, Atlanta, GA

Implementing Standard 189.1-2009 for High-Performance Green Buildings
June 26, 2010 – 8:00am – 4:00pm, Albuquerque, NM

Visit www.ashrae.org/189.1courses for more information and to register

Hot Products from ASHRAE

A leader in HVAC&R technology, ASHRAE publications cover topics that impact every facet of the environment, both indoors and out.

Latest Publications from ASHRAE!

- ☐ *Standard 189.1-2009, Standard for the Design of High-Performance Green Buildings* (A Jurisdictional Compliance Option of the IGCC)
- ☐ *ASHRAE Handbook Online* – Web-Based access to all 4 volumes
- ☐ *ASHRAE Pocket Guide* – Useful information that fits in a shirt pocket
- ☐ *IAQ Guide: Best Practices for Design, Construction and Commissioning*
- ☐ *Load Calculation Applications Manual (SI)*

Other Products from ASHRAE!

- ☐ *Energy Efficiency Guide for Existing Commercial Buildings*
- ☐ *Dampers and Airflow Control*
- ☐ *Advanced Energy Design Guide for Small Hospitals and Healthcare Facilities*
- ☐ *Principles of Heating, Ventilating, and Air Conditioning* – Textbook based on the 2009 ASHRAE Handbook - Fundamentals

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Technology for a Better Environment

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Dave Riemenschneider

Resource Promotion

Chad Miller

Technology Transfer

Sean O'Connor

Student Activities

Mike Malone

Historian/Webmaster

Michael Heinrich

Newsletter Editor

David Dowling

Program:

Creating Tomorrow's Workforce in Engineering and Science

Thursday, September 16, 2010 Meeting

SDSM&T Campus, Surbeck Center Hisega Room – Rapid City, SD

12:00-1:00

Nancy Anderson-Smith is the Director of Youth Programs and Continuing Education at SDSM&T. Before coming to SDSM&T, she worked in public relations and marketing in the Twin Cities. Her industry experience includes health care, printing, software, public relations, and marketing. Her clients included IBM, the IRS, John Deere, 1-800-Flowers and many others. She returned to SDSM&T to do this job because when she was a student there, she wished someone would have shown her the actual work she would have been doing as an engineer. Now she has the opportunity to help kids understand what engineers and scientists do.

Creating Tomorrow's Workforce in Engineering and Science – Helping kids understand more about engineering and science careers is critical to our future workforce. With the onset of retiring baby boomers and the lack of enrollment at engineering and science institutions, the U.S. is experiencing job gaps and a downturn in innovation. Working with children to help them develop an understanding and aptitude for these areas is important.

President's Message

Making a Difference

As we begin another year of ASHRAE business and programs, I would like to draw attention to a theme of "Making a Difference". Each of us, in our individual capacities, should strive to make a difference with the work we do. From the simplest temperature control sequence to the most complex system design, we have opportunity to improve any parameter in front of us. ASHRAE members across the globe make a difference every day. Please make your interests known as we are closing in on finishing our programs for the year and hopefully our programs will make a difference for you.

Allen Freeland, Michael Heinrich, and I attended the Chapters Regional Conference in Springfield, Missouri last month and had good meetings, technical presentations, and workshops. Next year the conference is in El Paso. Congratulations to Chad Miller who received the "Top Dog Award" for Research Promotion in Region IX. Great job, Chad!

Our September program will set the stage for the year as we will learn where engineering education is heading today at SDSM&T. Nancy Anderson-Smith is connected to many aspects of the students and continuing education programs at SDSM&T. Next month we look forward to a tour at RPM and Associates operation. Let's have a great year!

Mike Mueller

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Technology for a Better Environment

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November 18, 2010	Region IX RVC of Membership Promotion	Gaylen Atkinson
December 16, 2010	ASHRAE Distinguished Lecturer	Julian DeBulles
January 2011	11th Annual Electro – Technology Expo	Multiple
February 17, 2011	TBD	TBD
March 17, 2011	TBD	TBD
April 11, 2011	Society President	Lynn Bellenger
May 19, 2011	TBD	TBD
July 2011	ASHRAE - API Annual Golf Outing & Fund Raising	

Send program suggestions to: Sean O'Connor
(P) 605-348-2033
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programs@blackhillsashrae.org

Upcoming Events

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Obtain more information for the ASHRAE 2011 Winter Conference at www.ashrae.org.

Membership

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Program:

Tour RPM Facility

Thursday, October 21, 2010 Tour / Meeting

RPM Facility – Rapid City, SD

3:30 PM - 4:30 PM

BOG – RPM Conference Room 3:00 PM

RPM and Associates was founded in 1982 by Rob Mudge, Deb Mudge and Rob's parents, Jim and Phyllis Mudge. RPM and Associates is a manufacturing firm located in Rapid City and is a South Dakota corporation. Their core customers are coal fired power plants, mining operations, cement plants, chemical processing plants, Department of Defense and aerospace. They are focused on solving wear problems for Their customer base using innovative ideas, automatic welding systems, creative machining and proper material selection.

RPM uses chrome-carbide hardfacing, tungsten-carbide hardfacing and laser cladding to increase performance and provide solutions for wear in power generation and other industrial applications. They rebuild and manufacture new coal pulverizer grinding rolls, grinding tables, pulverizer mills, coal pipe such as elbows and tangents, overlay plate, wear liners, and other crushing equipment used in high-abrasion environments.

Rob Mudge, our tour guide and owner, holds both a Bachelor of Science Degree and Masters Degree in Metallurgical Engineering from the South Dakota School of Mines and Technology.

President's Message

As hunting seasons open across the region we can tell that fall is in the air. I would like to add one more "hunting season" as we try to bring in new ASHRAE members. I attended the Centralized Training for Membership Promotion last month at ASHRAE Headquarters in Atlanta and it was very informative! We have a full list of programs now and it would be a good time to invite a friend or colleague to join us as a guest.

ASHRAE is growing worldwide because it is respected internationally as an expert technical resource for building systems design and operation. Each of us can be proud of ASHRAE's influence in the world and our own membership to this prestigious society. Society's goal is to increase membership by 3000 members. In Region IX we have a goal of an additional 338 members.

We have two new members already this year and I would like to welcome both Jeremy Clickson, with Environmental Building Systems, and Ryan Poper, with Direct Digital Controls. The best way to have ASHRAE make a difference for you is to get involved. It is very rewarding.

I would also like to extend a sincere congratulations to the design team from West Plains Engineering who contributed to the first LEED Gold building in the state. The Paleontology Research Center at the School of Mines has received this rating. We will be touring this facility with students in November.

We had a very good response with last month's program and would like to share a link that Nancy sent to me for distribution to our members. This link: <http://s820.photobucket.com/home/SDSMTYPCE/allalbums> will take you to pictures from past camps that were held. An idea was brought to me our chapter supporting this program financially and we can discuss it at our next meeting."

Mike Mueller

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Historian/Webmaster

Michael Heinrich

Newsletter Editor

David Dowling

Program:

Pumping Technology in 2010

Thursday, November 18, 2010 Meeting

SDSM&T Campus, Surbeck Center Hisega Room – Rapid City, SD

12:00 PM - 1:00 PM

Besides electric motors, there are more pumps installed worldwide than any other piece of machinery. They consume an incredibly large portion of our energy, yet we typically give little thought to their selection and control. Little has changed with the design of pumps in over 150 years. However, the way we select and operate pumps has changed. Better said, the way we select and operate pumps CAN be done differently, some would say better. We can achieve lower installation costs, lower lifecycle maintenance costs, and significantly lower energy consumption. This discussion will take you through these changes.

In his current role with Armstrong, Richard Miller's duties include managing the Central Western US market for equipment in the HVAC market. Richard is based in Pine, Colorado (8300 feet).

Prior to joining Armstrong in January 2002, Richard worked for a number of other pump companies including Ingersoll-Dresser Pump (now Flowserve), Alfa Laval and KSB Pumps. With over 20 years of experience with pumps, valves, heat exchangers, controls and other fluid flow equipment, Richard has experience in inside sales, outside sales, technical and applications support, and customer service positions. He has expertise with virtually all types of centrifugal and positive displacement pumps in markets including HVAC, Fire, Plumbing, Water, Wastewater, Industrial, Mining, Pulp & Paper, Chemical and Petro-chemical.

Mr. Miller's education includes a Bachelor of Applied Science, Mechanical Engineering Physics from Queens University at Kingston, Ontario, Canada (1989). Continuing education programs taken include Total Quality Management, Communications, Management, and various pump, valve and controls courses.

President's Message

This month we will be putting an emphasis on Student Activities. Mike Malone, Jeremy Clocksin, and Steve Malone are the Student Activities Committee. They have been meeting and planning for several important upcoming student recruiting events. On November 15th they will be presenting to over 100 students in the ME 110 class which has primarily freshmen. On November 18th they are leading a tour of the new Paleontology Research Center (LEED Gold) facility. In addition to this, ASHRAE is the major sponsor of Engineer's Week this year and Mike Malone is enthusiastically working with an SDSM&T committee for the Rube Goldberg competition. Since our young engineers are the sustaining future of ASHRAE, I am seeking commitment from as many of you as possible to subsidize the payment of student dues. The student dues are \$20 per student per year and you can contact either Mike Malone or Judy Oakley if you or your company would like to make a difference in a student's life.

Mike Mueller

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Standard 90.1-2007 Available as Free Download

ATLANTA –In order to move the industry forward toward more energy efficient design, ASHRAE is making it easier than ever before to access its flagship energy standard, 90.1, available as a free download for a limited time.

Through a funding contract with the Department of Energy, copies of the I-P edition of ANSI/ASHRAE/IES Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, are being offered as a free downloadable PDF at www.ashrae.org/standard901-2007-free, starting Oct. 22, 2010.

“Standard 90.1-2007 is widely used throughout the design community, and the download version makes it available to users at their own computers for ready and easy access,” ASHRAE President Lynn G. Bellenger said. “Making the standard available for free ensures that it penetrates the marketplace and reaches owners, contractors and design teams. We appreciate the support of the Department of Energy in reaching a wider audience and extending access to our flagship energy conservation standard.”

Since being developed in response to the energy crisis in the 1970s, Standard 90.1 has become the basis for building codes, and the standard for building design and construction throughout the United States.

As buildings consume approximately 40 percent of the primary energy in the United States, the standard is an indispensable reference for engineers and other professionals involved in the design of buildings and building systems.

ASHRAE is an international technical society that fulfills its mission of advancing heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world through research, standards writing, publishing and continuing education.

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Las Vegas Convention Center, Las Vegas, NV

SHOW DATES AND HOURS:

Monday, January 31	10:00am - 6:00pm
Tuesday, February 1	10:00am - 6:00pm
Wednesday, February 2	10:00am - 4:00pm

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No one under 16 admitted. 16-17 must be accompanied by an adult.

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Program:

Variable Refrigerant Flow Technology

Thursday, December 16, 2010 Meeting

SDSM&T Campus, Surbeck Center Hisega Room – Rapid City, SD

12:00 PM - 1:00 PM

Julian R. de Bullet is native of Great Britain, and a Graduate of London University, where he obtained an Electrical Engineering degree and a Diploma in Marketing. He has over 35 years experience in the HVAC industry, where his career has concentrated on the applied use of Chilled Water and All-Air systems as a manager of applied equipment sales and as a manager of a service/performance contracting operation.

Julian currently lives in Washington D.C., where he serves as the Director of Industry Relations for McQuay International, and is an ASHRAE Distinguished Lecturer. He is a member of numerous industry associations concentrating on energy efficiency and responsible refrigerant use. As ASHRAE Vice President from 2001 through 2003, he served on the Board of Directors and the Executive Committee and was Chair of the Member Council and Publishing Council. He is also Past President of the National Capital Chapter and was Director and Regional Chair for ASHRAE Region III. He chaired the Professional Development Committee and is a member of the Programs and Education Council and the Society Advocacy Committee.

This month's program, Variable Refrigerant Flow Systems, will discuss the concept of multiple outdoor inverter driven compressors serving numerous indoor units while varying the refrigerant flow to meet individual zone requirements. The concept has been successfully applied for more than 20 years in Europe and Asia and is rapidly gaining acceptance in North America. A typical VRF system uses ductless indoor units, but new applications can apply ducted indoor fan coils and even water cooled applications. A comparison will be made between simple chilled water systems and VRF hybrid applications. Finally, energy savings will be compared to more conventional systems.

President's Message

As we race into the holidays and look forward to time with our family and friends, we should stop and give thanks to those who made a difference for someone in need this past year. With the challenges of a down economy, many more people have landed in the needs column. Many of us are blessed and are fortunate to be able to help others.

This month I would like to spotlight out Chapter Technology Transfer Committee (CTTC) Chair, Sean O'Connor, for his efforts to fill our year with quality programs. He hustled and had commitments early to bring a variety of interesting speakers. This month's Distinguished Lecturer will present a topic that will be a viable technology for years to come. I anticipate a strong attendance for this meeting.

I hope you and yours have a Merry Christmas and a safe and Happy New Year.

Mike Mueller

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Seminars & Courses at ASHRAE's Winter Conference in Las Vegas, NV

2 WAYS TO REGISTER

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Full Day Professional Development Seminar

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The Commissioning Process in New & Existing Buildings

Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Healthcare Facilities: Best Practice Design and Application

Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Complying with ASHRAE/IES Standard 90.1-2010

Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.



Implementing Energy Management in New and Existing Buildings: A Sustainable Activity

Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Integrated Building Design

Saturday, Jan 29 – 8:00 a.m. to 3:00 p.m.

Energy Modeling Best Practices and Applications: HVAC/Thermal

Tuesday, Feb 1 – 9:00 a.m. - Noon, 2:00 p.m. - 5:00 p.m.

Half Day Short Courses

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Fundamental Requirements of ASHRAE Standard 62.1-2010

Saturday, Jan 29 – 8:00 a.m. to 11:00 a.m.



Application of Standard 62.1-2010: Multiple Spaces Equations & Spreadsheet Calculation

Saturday, Jan 29 – Noon to 3:00 p.m.



Understanding Air-to-Air Energy Recovery Technologies and Applications

Sunday, Jan 30 – 2:00 p.m. to 5:00 p.m.

Chilled Beam Technology for Excellent Indoor Climate in an Energy Efficient Manner

Sunday, Jan 30 – 2:00 p.m. to 5:00 p.m.

Using Standard 90.1 to Meet LEED Requirements

Sunday, Jan 30 – 2:00 p.m. to 5:00 p.m.

The Commissioning Process & Guideline 0

Monday, Jan 31 – 2:30 p.m. to 5:30 p.m.

Determining Energy Savings from Performance Contracting and LEED Projects: M&V

Monday, Jan 31 – 2:30 p.m. to 5:30 p.m.

Understanding Standard 189.1-2009 for High-Performance Green Buildings

Monday, Jan 31 – 2:30 p.m. to 5:30 p.m.

Understanding & Designing Dedicated Outdoor Air Systems (DOAS)

Tuesday, Feb 1 – 9:00 a.m. to Noon

Low Temperature Radiant Heating & High Temperature Radiant Cooling Systems

Tuesday, Feb 1 – 9:00 a.m. to Noon

Successful Solar Applications for Commercial & Industrial Facilities

Tuesday, Feb 1 – 9:00 a.m. to Noon

Avoiding IAQ Problems: Using ASHRAE's New IAQ Guide

Tuesday, Feb 1 – 2:00 p.m. to 5:00 p.m.

District Cooling & Heating Systems: Central Plants

Tuesday, Feb 1 – 2:00 p.m. to 5:00 p.m.

Designing Toward Net Zero Energy Commercial Buildings

Tuesday, Feb 1 – 2:00 p.m. to 5:00 p.m.



Get web-based training you can trust, anytime, anywhere, and earn PDHs/CEUs in the process.

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ASHRAE Certification Programs

Take advantage of ASHRAE's special pencil & paper administration of our certification examinations on Wednesday Feb. 2, 2011, in conjunction with the 2011 ASHRAE Winter Conference.

- Building Energy Assessment Professional (BEAP)
- Building Energy Modeling Professional (BEMP)
- Commissioning Process Management Professional (CPMP)
- Healthcare Facility Design Professional (HFDP)
- High-Performance Building Design Professional (HBDP)
- Operations & Performance Management Professional (OPMP)

For more info, visit

www.ashrae.org/lasvegascertification

New Publications from ASHRAE

- ☐ Standard 189.1-2009: Standard for the Design of High-Performance Green Buildings (A Jurisdictional Compliance Option of the IGCC)
- ☐ Standard 189.1-2009 User's Manual (A Jurisdictional Compliance Option of the IGCC)
- ☐ ASHRAE GreenGuide 3rd Edition – The Design Construction, and Operations of Sustainable Buildings
- ☐ ASHRAE Standard 90.1-2010: Energy Standard for Buildings Except Low-Rise Residential Buildings
- ☐ ANSI/ASHRAE 55-2010 – Thermal Environmental Conditions for Human Occupancy
- ☐ ANSI/ASHRAE 62.2-2010 – Ventilation for Acceptable Indoor Air Quality in Low-Rise Residential Buildings
- ☐ ANSI/ASHRAE 62.1-2010 – Ventilation for Acceptable Indoor Air Quality

Package:

- ☐ ANSI/ASHRAE 15-2010 – Safety Standard for Refrigeration Systems
- ☐ ANSI/ASHRAE 34-2010 – Designation and Classification of Refrigerants

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