

The

Pile of Bones

Published by the Regina Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers

FEBRUARY 2010

President's Message

by Greg Flutter

Hello from sunny St. Thomas, US Virgin Islands! I'm writing this newsletter while basking in +29°C weather while sitting aboard the massive Disney Magic cruise ship. Sorry, I don't mean to rub it in (ok maybe a little bit)! Hope the weather is reasonable back in Regina.

Thanks to all who came out to January's meeting to meet and listen to ASHRAE Society President Gordon Holness. Gordon gave a talk about his Presidential Theme "Sustaining Our Future by Rebuilding Our Past". I hope everyone enjoyed his presentation.

For this month's meeting, George Reed, the legendary former running back for the Saskatchewan Roughriders will be giving a talk. See Heric's newsletter section for more details.

For next month's meeting, we are again switching the meeting to Monday March 8th to accommodate our speaker. We will be having another

ASHRAE Distinguished Lecturer with us on that date. Julian de Bullet, from Daikin-McQuay will give a presentation on Variable Refrigerant Flow Systems which is an interesting high efficient technology. I'm sure it will be a presentation worth attending. Please mark March 8th on your calendars.

And finally, remember that CRC (Chapters Regional Conference) is happening this coming May and we are hosting the conference. Jerry Boulanger is still looking for more volunteers to help out. Please either contact Jerry directly, or any of the Chapter's Board of Governors, for more information.

Hope to see you on Wednesday!

Meeting Notice!

**Wednesday
February 10, 2010**

**Hotel Saskatchewan
Radisson Plaza
2125 Victoria Avenue
Regina, Sk.**

5:00 -Social/Cocktails

5:30 – George Reed, former Saskatchewan Roughrider running back will present on his playing days with the Roughriders & taking questions

6:30 - Dinner

7:15 - Chapter Meeting

Please note:

John Ross Curling Classic
The John Ross Curling event is scheduled for Saskatoon on Saturday, March 20th. Please contact Jerry Boulanger at 352-0656 or jclan@sasktel.net if you are interested in curling to represent the Regina Chapter. Curlers typically drive up in the morning and come back in the evening.

Technical Program for February

For our February Meeting, we will have a talk and question & answer session with former Saskatchewan Roughrider great - George Reed

George Reed played on the Roughriders from from 1963 to 1975, and was part of the Rider Grey Cup winning team in 1966. George Reed is the second most prolific running back in CFL history. He is currently working as a Corporate Event Host for the Casino Regina.

George Reed will be talking about his days playing football for the Saskatchewan Roughriders and will also be taking questions at the end.

2009/2010 Meetings and Events Schedule

September 9, 2009: Darron Rempel - Chilled Beams and Displacement Ventilation

October 14, 2009: Darren Alexander (TWA Panel Systems) – Radiant Sails & Stanley Mumma, Distinguished Lecturer (DL) - DOAS Systems & Radiant Panels

November 18, 2009: CSC & HDA Engineering Ltd. - Saskatchewan Disease Control Laboratory Tour

December 10, 2009: Christmas Social – Dinner and Entertainment at the Lazy Owl on the U of R Campus

January 12, 2010: Presidential Visit, President Gord Holness

February 10, 2010: George Reed

March 8, 2010: Variable Refrigerant Flow Systems - Julian de Bullet DL

April 14, 2010: Student night

May 12, 2010: Shawn Wedewer - SRC presentation - Commercial Cogeneration
Jerry Boulanger - J-Clan Services - Delta T and How to Get it

June, 2010: ASHRAE Research golf tournament

Board of Governors for the Regina Chapter

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Committee Chair Reports

President Elect & Chapter Technology Transfer Chair

by Heric Holmes

It is exciting to have George Reed talk at ASHRAE. Having seen his photo on Taylor Field and hearing about his exploits from my dad, it will be good to hear him speak on his time in Regina.

Gord Holness's presentation last month about Sustaining our future was very timely. I would like to thank Rob Craddock for working behind the scenes on getting the President to come here.

Next Month will be DL visit from McQuay International's Julian de Bullet. His presentation will be on Variable Refrigerant Flow Systems.

If anyone has other suggestions for programs this year, please forward them to Heric at h.holmes@mac-eng.ca.

Heric Holmes

President Elect and Chapter Technology Transfer Chair

Past President & Research Promotion Chair

by Ted Cooke

Gordon Holness, the 2009-10 President of ASHRAE Society felt compelled to visit our amazing city and ASHRAE chapter last month. Not only did he feel duty-bound to visit our phenomenal chapter, but he did so during the month that would give him the greatest opportunity to experience the true Great White North. To help him keep warm while he was here, we decided to put him to work thanking the numerous ASHRAE Research Donors from our chapter and handing out Donor Recognition Coins and Certificates.

Again, I would like to thank the amazing people and companies who donated to the 2008-09 Research Campaign making our chapter one of the highest donors per member in the world.

Please take a moment to review and thank the list of Donors from the 2008-09 Research Promotion Campaign.

SILVER LEVEL DONORS (\$1,000 - 2,499)

Saskatchewan Insulation Contractors Association
SaskEnergy

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Trane
Walter's Industrial Mechanical Ltd.

Ted Cooke

Past President & Research Promotion Chair

Vice President & Newsletter

by Jason Danyliw

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Regina Chapter Website Address:

<http://regina.ashraechapters.org/>

ASHRAE HVAC&R Industry eNewsletter

If you wish to subscribe to the ASHRAE HVAC&R Industry eNewsletter, e-mail subscribe-enews@ashrae.org with “Subscribe this address to The HVAC Industry eNewsletter” in the e-mail subject line.

ASHRAE Learning Institute

The ASHRAE Learning Institute is offering on-line courses. There are 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 24 hours prior to an online seminar. Course times are in Eastern US Time Zone.

Dates Confirmed for Next Satellite Broadcast/Webcast

The April 22, 2010, ASHRAE Webcast, “**Right From the Start – Commissioning for High Performing Buildings,**” will provide the building community with tools to overcome commissioning hurdles and make the process “business as usual.” This **free** webcast will be transmitted **live** via the internet from 1:00 – 4:00 p.m. EDT.

Webcast participants may earn three (3) Professional Development Hours (PDHs) or (3) AIA Learning Unit and chapters can earn 100 PAOE Points for hosting the program.

The webcast presenters are:

- o **Rick Casault, P.E., CCP, CDT**, President, Casault Engineering, Seattle, WA
- o **H. Jay Enck, CxAP, HBDP, LEED™AP, CPMP**, Founder/Principal/Senior Commissioning Agent, Commissioning & Green Building Solutions, Inc., Buford, GA
- o **Michael L. Weiss, Ph.D. ABD, HCCP**, Managing Principal and President, WorkingBuildings, LLC, Atlanta, GA
- o **Ronald Wilkinson, P.E., LEED™AP**, Senior Commissioning Project Manager, AKF Group, LLC, New York, NY

Online registration via the ASHRAE website will begin March 2, 2010. There is no fee for registration.

Watch for additional information regarding registration and the program and via email, www.ashrae.org, and *ASHRAE Insights*. Please share this information with your colleagues to assist them with scheduling. If you have questions, please contact rdouglas@ashrae.org or call (678) 539-1128.

Changes Proposed for Standard 90.1 Address Metal Buildings

ATLANTA – Changes to assembly descriptions and U-Factors regarding metal building assemblies are being considered in the 2010 version of Standard 90.1, expected to be published in the fall.

ANSI/ASHRAE/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings.

The changes regarding metal buildings are among many being proposed for the 2010 standard. Some 43 addenda already have been approved, impacting the standard in a variety of ways from energy recovery to controls to daylighting.

The proposed changes are in Standard 90.1 Appendix A “Rated R-Value of Insulation and Assembly U-Factor, C-Factor and F-Factor Determinations.” The revised Appendix A resulted from a Metal Building Task Group investigation of existing metal building stock that revealed that typical installation practices of the single and double-layer assemblies described in Appendix A compress insulation and thereby negatively affects the thermal performance of the assembly. The previously published R-Values/U-Factors did not reflect the thermal performance from such installation methods, which typically yield lower R-Values and higher U-Factors. The proposed Appendix A adds revised modeling equations to estimate the performance of compressed insulation in metal building assemblies based on these less energy-efficient installation practices, as well as incorporates the modified R-Values/U-Factors for metal building assemblies that reflect these new modeling equations.

The Metal Building Task Group's investigation grew out of an ASHRAE appeals panel recommendation that SSPC 90.1 review expeditiously all available information to determine if the metal building assembly U-Factors in the current 90.1 Standard are appropriate.

The assembly descriptions and U-Factors proposed for inclusion in the new 90.1-2010 Standard appear below. This excerpt contains items from the first public review draft of addendum *bb* to Standard 90.1 that did not change in the second public review draft that was completed in late December. Items that received comments in the second public review draft will be discussed by the standard 90.1 committee at the ASHRAE Winter Conference in Orlando later this month.

ASHRAE, founded in 1894, is an international organization of some 50,000 persons. ASHRAE 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.

Metal Building Roofs

Single Layer. The rated R-value of insulation is for insulation installed perpendicular to and draped over purlins and then compressed when the metal roof panels are attached. A minimum R-3 thermal spacer block between the purlins and the metal roof panels is required, unless compliance is shown by the overall assembly U-factor.

Double Layer. The first rated R-value of insulation is for insulation installed perpendicular to and draped over purlins. The second rated R-value of insulation is for unfaced insulation installed above the first layer and parallel to the purlins and then compressed when the metal roof panels are attached. A minimum R-3 thermal spacer block between the purlins and the metal roof panels is required, unless compliance is shown by the overall assembly U-factor.

Liner System (Ls). A continuous membrane is installed below the purlins and uninterrupted by framing members. Uncompressed, unfaced

insulation rests on top of the membrane between the purlins. For multilayer installations, the last rated R-value of insulation is for unfaced insulation draped over purlins and then compressed when the metal roof panels are attached. A minimum R- 3 thermal spacer block between the purlins and the metal roof panels is required , unless compliance is shown by the overall assembly U- factor.

Insulation System	Rated R-Value of Insulation	Overall U-Factor for Entire Base Roof Assembly
Standing Seam Roofs with R-3 Thermal Spacer Blocks		
Single Layer	R-10	0.115
	R-11	0.107
	R-13	0.101
	R-16	0.096
	R-19	0.082
Double Layer	R-10 + R-10	0.088
	R-10 + R-11	0.086
	R-11 + R-11	0.085
	R-10 + R-13	0.084
	R-11 + R-13	0.082
	R-13 + R-13	0.075
	R-10 + R-19	0.074
	R-11 + R-19	0.072
R-13 + R-19	0.068	

Insulation System	Rated R-Value of Insulation	Overall U-Factor for Entire Base Roof Assembly
	R-16 + R-19	0.065
	R-19 + R-19	0.060
Liner System	R-19 + R-11	0.035
	R-25 + R-11	0.031
	R-30 + R-11	0.029
	R-25 + R-11 + R-11	0.026
Standing Seam Roof without Thermal Spacer Blocks		
Liner System	R-19 + R-11	0.040
Thru-Fastened Roofs without Thermal Spacer Blocks		
Single Layer	R-10	0.184
	R-11	0.182
	R-13	0.174
	R-16	0.157
	R-19	0.151
Liner System	R-19 + R-11	0.044

Metal Building Walls

Single Layer. The first rated R-Value of insulation is for insulation compressed between metal wall panels and the steel structure.

Insulation System	Rated R-Value of Insulation	Overall U-Factor for Entire Base Wall Assembly
Single Layer	R-10	0.186
	R-11	0.185
	R-13	0.162
	R-16	0.155
	R-19	0.147

Looking for Guidance on Standard 189.1? Visit www.ashrae.org/greenstandard

ATLANTA – As publication of the nation’s first code-intended high-performance green building standard draws nearer, a Webpage providing the detailed information about the standard, including a draft copy of the document, has been launched.

Proposed Standard 189.1, *Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings*, moved one step closer to publication in December. It was approved for publication by the Boards of Directors of ASHRAE, IES and USGBC, the three groups that are partnering in its development. ASHRAE is going through the final stages of the American National Standards Institute consensus development process and is hopeful the standard will be available in January.

“Given that this standard will set the foundation for green building codes, it is vital that the building industry is familiar with its requirements,” Kent Peterson, chair of the Standard 189.1 committee, said. “ASHRAE, USGBC and IES recognize the potential of this standard to change the marketplace and are working to educate the industry. Given its impact, we also are working to make the standard available as quickly as possible.”

www.ashrae.org/greenstandard serves as a one-stop resource for information on Proposed Standard 189.1, *Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings*. The page contains an easily readable version of the standard, along with more information on the areas addressed by the standard and other resources for high-performance building.

Proposed Standard 189.1 is being developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) in conjunction with the Illuminating Engineering Society of North America (IES) and the U.S. Green Building Council (USGBC). The standard, slated to be the first code-intended commercial green building standard in the United States, is expected to be published in early 2010.

New Guidance on Clearing the Indoor Air through Improved IAQ

ATLANTA – Ensuring good indoor air quality (IAQ) means everyone breathes a little easier: occupants who experience improved health, comfort and productivity, and owners who see increased building value and reduced risk.

New guidance for achieving enhanced IAQ is available from five leading building industry associations and the U.S. Environmental Protection Agency. The book and CD provide strategies needed to achieve good IAQ using proven technologies and without significantly increasing costs.

“The health and comfort of buildings occupants is too important to leave IAQ as an after-thought in design, construction and operation,” said Andrew Persily, Ph.D., chair of the committee that wrote the new guidance. “There is plenty of experience out there to help avoid IAQ problems in buildings, allowing all of us to breathe a little easier.

The *Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning* is a collaboration between ASHRAE, the American Institute of Architects, the Building Owners and Managers Association International, U.S. Environmental Protection Agency, the Sheet Metal and Air Conditioning

Contractors of North America and the U.S. Green Building Council.

The book describes 40 strategies for achieving critical IAQ objectives related to moisture management, ventilation, filtration and air cleaning and source control. It also highlights how design and construction teams can work together to ensure good IAQ strategies are incorporated from initial design through project completion.

Here a few tips from the guide on improving IAQ in buildings:

- Bring IAQ into the very earliest design discussions. Don't get stuck retrofitting the design for IAQ at the end of the process
- Strictly limit liquid water penetration and condensation in the envelope, and control indoor humidity.
- Where outdoor air quality is poor, use enhanced filtration and air cleaning to provide high quality ventilation air. Locate outdoor air intakes away from contaminant sources and provide the means to measure and control minimum outdoor airflows.
- Select building materials and furnishings that have low contaminant emissions and don't require use of high-emitting cleaning products.
- Exhaust contaminants from indoor activities as close to their source as possible.
- Recognize that O&M is essential to long term IAQ, and provide the access, training and documentation needed to facilitate O&M.
- Commission from design through occupancy to ensure that IAQ objectives are met.

A summary document of the *Indoor Air Quality Guide* – ideal for a general understanding of the importance of major IAQ issues can be downloaded for free at www.ashrae.org/iaq. The full publication complete with a CD that contains detailed guidance essential for practioners to design and achieve good IAQ is available in hard copy or electronically for \$29.

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore.

ASHRAE Publishes Update to Principles of HVAC

ATLANTA—A new textbook designed to double as a reference manual that allows engineers to build on their knowledge of HVAC design procedures and methods has been published by ASHRAE.

Principles of Heating, Ventilating and Air-Conditioning builds on much of the basic information in the 2009 ASHRAE Handbook—*Fundamentals* and contains the most current ASHRAE procedures and definitive, yet easy to understand, treatment of building HVAC systems, from basic principles through design and operation.

The book may be used for/by:

- undergraduate engineering courses in the general field of HVAC
- similar courses at technical institutes
- continuing education and refresher short courses for engineers
- adult education courses for non-engineers.

There are several significant changes in the new edition, including new values for climatic design information; new values of heating, wind and cooling and dehumidifying design conditions; improved values of thermal conductivity and resistance for common building and insulating materials; and an extensively revised chapter on residential heating and cooling load calculations.

Additionally, the chapters on system design and equipment have been significantly revised to reflect recent changes and concepts in current heating and air-conditioning system practices

Also available is *Principles of HVAC Solutions Manual*, which contains revised solutions to most of the problems in the Principles book.

Co-authors are Ronald Howell, Ph.D., P.E., William Coad and the late Harry Sauer Jr., Ph.D., P.E.

The cost of *Principles of HVAC* is \$89 (\$76, ASHRAE members; \$58, ASHRAE student members), while the cost of the solutions manual is \$59 (\$50, ASHRAE members).

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, by mail at 1791 Tullie Circle NE, Atlanta, GA 30329, or visit the ASHRAE.org Bookstore.

Standard 189.1 to Provide a Strong Foundation for High-Performance Green Buildings

ATLANTA—A new standard for the design of high-performance green buildings is set to revolutionize the building industry. Published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), in conjunction with the Illuminating Engineering Society of North America (IES) and the U.S. Green Building Council (USGBC), Standard 189.1, *Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings*, is the first code-intended commercial green building standard in the United States.

The standard, published Friday, provides a long-needed green building foundation for those who strive to design, build and operate green buildings. From site location to energy use to recycling, this standard will set the foundation for green buildings through its adoption into local codes. It covers key topic areas similar to green building rating systems: site sustainability, water use efficiency, energy efficiency, indoor environmental quality and the building's impact on the atmosphere, materials and resources. For complete information on the standard, including a readable copy, visit www.ashrae.org/greenstandard.

The energy efficiency goal of Standard 189.1 is to provide significant energy reduction over that in ANSI/ASHRAE/IESNA Standard 90.1-2007. It offers a broader scope than Standard 90.1 and is intended to provide minimum requirements for the siting, design and construction of high performance, green buildings.

“The far-reaching influence of the built environment necessitates action to reduce its impact,” Gordon Holness, ASHRAE president, said. “Provisions in the standard can reduce negative environmental impacts through high-performance building design, construction and operations practices. Ultimately, the aim is not just energy efficiency but a balance of environmental responsibility, resource efficiency, occupant comfort and well being and community sensitivity, all while supporting the goal of sustainable development.”

“IES is pleased to be a cosponsor of this standard that will have a significant impact on

requirements for high-performance green buildings and the building industry as a whole,” Rita Harrold, director of technology for IES, said. “We congratulate the Project Committee for the tremendous effort and dedication of its members in the fast track development of a consensus standard. We look forward to continuing the partnership with ASHRAE and USGBC as the standard continues to evolve through future continuous maintenance proposals.”

"Greening the building code is fundamental to the U.S. Green Building Council's goal of market transformation and is also a critical factor in how the building industry is working to mitigate climate change," said Brendan Owens, VP, Technical Development, U.S. Green Building Council. "We're extremely excited to see our collective efforts over the past three years come to fruition in the form of this important standard."

Standard 189.1 has been written by experts representing all areas of the building industry, including engineers, lighting designers, sustainability experts, building owners, designers, architects, code and compliance officials, utilities, materials experts and equipment manufacturers. The technical requirements in the standard were also supported by input from the building industry during the public review process.

To order, contact ASHRAE Customer Service at 1-800-527-4723 (United States and Canada) or 404-636-8400 (worldwide), fax 404-321-5478, or visit www.ashrae.org/bookstore. The cost of Standard 189.1 is \$119 (\$99, ASHRAE members)

ASHRAE Technology Awards Highlight Outstanding Building Projects

ORLANDO, Fla.—Designers of systems for two office buildings, a warehouse and college library are recognized by ASHRAE for incorporating elements of innovative building design.

First place recipients of the ASHRAE Technology Awards were recognized at the Society's 2010 Winter Conference, held this week in Orlando, Fla. The recipients have applied ASHRAE standards for effective energy management.

The following are summaries of the winning projects.

The Terry Thomas

Michael Hedrick, Thomas Marseille, P.E. and Long Lam; Stantec Consulting; Seattle, Wash. receive first place in the new commercial buildings category for a four-story office building, the Terry Thomas, Seattle, Wash.

The Terry Thomas is the first modern Class A office building to be built without mechanical cooling in the Puget Sound region in decades. Shading, daylighting, building form and structure and other load reduction strategies were critical to the successful implementation of a passive cooling strategy. The use of natural ventilation, along with a hydronic heating system, has drastically reduced the energy consumption of the building to 45.9 kBtu/sf-year, 53 percent better than the average office. Additionally, the building includes: automated external blinds controlled by meteorological conditions; motorized louvers controlled by CO₂ sensors during the heating season and thermostats in the cooling season; integrated building design for passive cooling, daylight and occupancy; and waterless urinals and dual-flush water closets

Sobey's Warehouse

Martin Roy, P.Eng.; Martin Roy et Associés, Inc.; Deux-Montagnes, Québec, Canada, receives first place in the industrial facilities or processes category for Sobey's Warehouse, Trois-Rivières, Québec, Canada.

A refrigerated warehouse in Trois-Rivières can be a very chilly place when winter comes around; that's why Roy worked to balance keeping the warehouse cold and its employees warm and comfortable, all while saving energy. An ammonia central chiller and glycol secondary distribution fluid system keeps the warehouse at 39 degrees Fahrenheit (4 degrees Celsius), and can operate in free cooling mode by using the thermosiphon principle. Ammonia is one of the best refrigerants to get high efficiency and has non-ozone depleting potential and zero global warming potential. Heat rejection from the warehouse chiller occurs simultaneously with space heating the office and common spaces. These spaces are also heated by a hydronic radiant floor and cooled by fan-coils. Additionally, the warehouse includes daylighting

and occupancy detectors to control high efficiency lighting fixtures and treats all of its water on-site using constructed wetlands

IDeAs Design Facility

Peter Rumsey, P.E., Fellow ASHRAE; Rumsey Engineers; Oakland, Calif. receives first place in the existing commercial buildings category for his remodel of a one story office building, IDeAs Design Facility, San Jose, Calif.

Rumsey's work on a California electrical engineering consulting firm's offices resulted in one of the world's first net-zero-energy and zero-carbon-emission buildings. The 7,200 sq. ft. commercial office building was designed to meet 100 percent of its net energy requirements using renewable energy from photovoltaics. A topping slab was designed containing cross linked polyethylene radiant tubing for both heating and cooling; using water to convey heating and cooling through a radiant system uses less energy to provide the same amount of conditioned air than a forced air system. Daylighting and natural ventilation is provided by a 45 ft. long south-facing operable glass door façade between the building and the courtyard, as well as multiple skylights. The building showed a 43 percent reduction in energy use from California's Title 24 and a 60 percent reduction from ASHRAE Standard 90.1-1999. In the spring of 2009, the building generated more energy than it consumed.

The Richard J. Klarcheck Information Commons Building

Donald McLauchlan, P.E., Steven Maze and David Lavan; Elara Energy Services, Inc.; Hillside, Ill. receive first place in the new institutional buildings category for the Richard J. Klarcheck Information Commons Building at Loyola University, Chicago, Ill.

The Loyola's Information Commons Building, located on the shores of Lake Michigan, combines state-of-the-art mechanical systems and striking architectural features; glass exposures on the east and west sides allow views through the building to the lake. Effective natural ventilation is provided throughout the open areas due to automatically controlled operable windows on the east façade and inner windows on the west double façade. Dual path custom designed air handlers were installed to incorporate multiple functions

depending on the building mode of operation. The contoured ceiling consists of coffered pre-cast concrete panels with cross linked polyethylene tubing set just below the surface; the system was designed to meet 60 percent of the design sensible cooling load. The exceptionally innovative design is a result of a fully collaborative approach by the Architect, Structural Engineer, MEPFPIT Engineer and Klimaengineer.

Please feel free to contact Amanda Dean at adean@ashrae.org after the ASHRAE Winter Conference (January 29) for photos of the listed members receiving their awards.

Slash Urban Energy Use: ASHRAE Conference Offers Guidance on Cutting Energy Waste

ATLANTA – Bright lights, big cities translate into high energy use and cost.

Cities contribute to 67 percent of the world's primary energy demand, according to the 2008 World Energy Outlook published by the International Energy Agency. The Agency shows that cities emitted 19.8 gigatonnes of CO₂ from energy use in 2006, which is 71 percent of global energy related CO₂ emissions. Both of those percentages are expected to increase in the future.

To guide the building community and government in reducing energy use, ASHRAE is hosting *Existing Buildings in Urban Areas: Dramatically Cutting the Energy Waste*, a conference that will address theoretical and practical matters associated with major improvements in the energy efficiency of existing buildings.

The conference takes place April 19-20, 2010, at the Grand Hyatt in New York, N.Y. To register or for more information, visit www.ashrae.org/cutenergywaste. Registrations costs are \$700 (\$620 ASHRAE members) for advanced registration; \$800 (\$720 ASHRAE members) for on-site registration.

“The greatest opportunity to change energy consumption in the built environment is through modification of existing buildings,” Michael Bobker, chair of the conference, said. “Only 2 percent of building stock is built new each year, so the focus must be given to the 98 percent of existing buildings if we are to reach the much-needed

worldwide reduction in energy consumption for which we have been striving.”

The conference addresses investment and financial decision-making, effective public policies, and necessary technical steps (energy audits, commissioning, retro-commissioning, benchmarking of utility consumption and design and construction of energy related problems).

It is divided into two tracks: technical and policy and management. Technical sessions include *The Engineering Process: Getting It Right; Urban Challenges to Net-Zero-Energy; Necessary Things: When the T-5 Upgrade Just Isn't Enough; Engineering Strategically with Models; Engineering Solutions for Tenancy and Metering Issues; and Building Performance and IEQ: Saving Energy While Enhancing Service Quality*. Policy and Management sessions include *The International Urban Challenge: Bringing Stakeholders Together; Energy Accountability: You Can't Control What You Don't Measure; What is Working: Tales from Around the World on Existing Building Energy Performance; Real Estate Decision-Making: Bridging the Gap Between Engineers and Decision Makers; Training and Education: Getting Staff Right; and Getting Energy Into Green Leases: A Mock Green Lease Negotiation*.

ASHRAE Specialty Conference to Focus on Improving School Facilities, Young Minds

ATLANTA—Maximizing facility performance, and thereby students' potential, is at the heart of the ASHRAE High Performance K-12 School Facilities conference, to be held Mar. 1-2, 2010 in Atlanta, Ga.

The conference will present an integrated approach to complying with codes and standards while achieving a cost effective high performance solution to K-12 facility design, construction and operation. Its goal is to bring together administrators, design professionals, policy makers and other stakeholders to learn about the many ways to improve these facilities on operational, fiscal, engineering and administrative levels.

“Sixteen percent of schools districts' controllable costs are spent on energy,” Ben

Leppard, a member of the conference steering committee and track chair, said. “By focusing on energy efficiency and high-performance goals a school's energy bills can be lowered, saving millions of dollars each year which can be redirected into facilities, teachers' salaries, computers and textbooks.”

Experts in the fields of acoustics, lighting, ventilation, system controls, energy efficiency and operation and maintenance will lead the stakeholders through the complex integration of systems, policies and legislation on a straightforward path to achieving high performance new and existing K-12 facilities and higher performing students.

“Improved indoor air quality, acoustically designed indoor environments and high-performance lighting systems have the potential to increase student productivity,” Leppard said.

Attendees of the conference may attend sessions that focus on three key areas of high-performance school facilities: ventilation systems, building systems control and acoustics.

Advance conference registration is \$450 (\$350 member price) and \$500 onsite (\$400 member price). More information can be found at www.ashrae.org/highperformanceschools.

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