THE HOT AIR DIFFUSER
IDAHO CHAPTER NEWSLETTER

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PRESIDENT'S MESSAGE

Hello all Idaho ASHRAE Members,

I would like to welcome everyone to a new year of ASHRAE. Last year was a great year for our chapter, and we had a great CRC (Chapter Regional Conference) this past August. I am looking forward to another year of outstanding programs that everyone finds interesting and informative.

Please let Carl Marcum know if there is a topic or speaker you would be interested in hearing this year. Additionally, please give us your feedback on the programs.

We are planning on another technical seminar in either March or April and of course our golf tournament next June. I'm looking forward to seeing everyone again September 12, 2008, so please come and get involved and let's have a great year!

Jeff Fulcher
President
Idaho Chapter ASHRAE

SEPTEMBER PROGRAM

This month's speaker is Mark Dart with Intermountain Industrial Pumps. He will talk about vertical inline multistage pumps and how they are used in a Booster Paq system.

WHEN: September 12, 2008
11:45 a.m.—1:00 p.m.

WHERE: Idaho Power Building
1222 Main Street
Boise, ID

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Recreation Center Focus of ASHRAE Student Design Competition

ATLANTA – Healthy bodies and a healthy building go hand-in-hand in the winning entries for ASHRAE's 2008 Student Design Competition.

This year's competition featured architectural design as well as selection and design of HVAC&R systems for a 60,000-square-foot community recreation center. The center features a gym with two full-size basketball courts and a running track, a wellness center with fitness equipment room and aerobics room, a natatorium with a six-lane swimming pool and indoor racquetball courts.

First place in the HVAC system selection category is awarded to Alyssa Adams, James Gawthrop Jr., Amy Leventry, Gregory Smithmyer, Calvin Douglass, Justin Herzing and Michael Smith of The Pennsylvania State University, University Park, Pa. Their advisor is William Bahnfleth, Ph.D., P.E.

The students chose a ground-source heat pump with active chilled beams or fan coils in a four-pipe system configuration for both heating and cooling and a dedicated outdoor air system for all spaces with an enthalpy wheel for energy recovery and a solar assisted LiCl dehumidification unit in the natatorium space.

"This solution was found to be the most sustainable of all the systems considered," the students wrote. "It uses heat transfer from the earth as opposed to burning fossil fuels and utilizes solar energy from the solar thermal collection panels, reducing the amount of energy supplied to the building and the energy footprint of the facility. Electricity used by the facility is directly translated into emissions at the power plant. Therefore, minimizing the onsite energy consumption not only saves energy but also reduces carbon emissions."

First place in the HVAC system design category goes to Chaowanaphan Lekkham, Patarapol Puangkum, Pakorn Nontiwatwanich, Wiroj Ekwongmunkong and Supayos Suveepattananont of Chulalongkorn University, Bangkok, Thailand. Their faculty advisor is Chirdpun Vitooraporn, Ph.D.

The students chose an electric air-cooled chiller system with 134a as a primary refrigerant and water as a secondary refrigerant. Elements of the system include variable-speed drives, outside air units, CO2 sensors, and heat pipe and heat recovery wheel units.

"The relative energy consumption as well as relative operating and maintenance costs determined that the system is not only beneficial for the building owner and users but for the environment as well," the students wrote. "We believe our design provides a functional, economical, environmentally friendly and sustainable HVAC system for serving the center."

First place in the architectural design category is awarded to Alexandra Gibson, Justina Jones, Bryan Quarles and Bazigha Tufail of The University of Kansas, Lawrence, Kan. Their advisor is Brian A. Rock, Ph.D., P.E.

Their design was based on their goal of using sustainable technologies for HVAC&R, lighting, energy supply and water use. Key features include a green roof to combat the urban heat effect and to provide extra roof insulation as well as contributing to CO2 absorption/oxygen output; rainwater harvesting; development of proper lighting controls detecting the amount of daylight penetration, efficient illumination fixtures and the use of light shelves for indirect lighting; and photovoltaic panels to minimize electricity use.

"To produce a building that includes all of these ideas while remaining beautiful and also acting as an educational tool, integration of these systems from the beginning from the design was a key element," the students wrote.

Awards will be presented at ASHRAE's 2009 Winter Meeting Jan. 24-28 in Chicago. Winning student groups will each have a poster presentation to display their projects at the meeting.

The competition recognizes outstanding student design projects, encourages undergraduate students to become involved in the profession, promotes teamwork and allows students to apply their knowledge of practical design.

ASHRAE, founded in 1894, is an international organization of 50,000 persons. Its mission is to advance through research, standards writing, publishing and continuing education the arts and sciences of heating, ventilation, air conditioning and refrigeration (HVAC&R) to serve humanity and promote a sustainable world.

HISTORY LESSON

Five Years Ago

The chapter president was Matthew May. The meeting was held on September 12, 2003, at the Double Tree Riverside. Tom Paladino, P.E., gave a presentation on green buildings and the integrated process involved in the design of high performance buildings.

Fifteen Years Ago

The chapter president was Roger Albers. The meeting was held on September 10, 1993, at Edwards Restaurant. Jon Mason presented a video tape of the first 20 years of activities in ASHRAE Society.

Twenty Years Ago

The chapter president was Pat House. The meeting was held on September 9, 1988, at the Kings Table Restaurant. Ms Bobbie Patterson, Executive Director of the Boise Convention and Visitors Bureau, spoke on area development and efforts to build a downtown convention center.

An interesting quote in the September 1988 newsletter follows:

ACHTENSHUN!

DAS MACHINEN IST NODT FOR GERFINGERPOKEN AND METTENGRABBEN. IST EZY FOR BREKKEN DAS SPRINGENWERKS, BLOWENFUSEN MIT SOUDISCH POPEN UND SPITZENSPARKEN. IST NIXT GEWERKEN BY DUMKOFFS! DAS RUBBERNEKKEN SEGHTSEEREN UND STUPIDISCH GOOFOFFERS BAST RELAXEN, KIPP HANDS IN POKKETS UND VATCH DAS STOFFA KUMOUDT!

Steve Hardy
Historian

JOKE OF THE MONTH

An engineering student is walking along when a fellow student arrives on a new bicycle. Impressed, he asks, "Where did you get that beautiful bicycle?"

"Well," the second engineering student says, "A couple of days ago I was just walking along when this gorgeous blonde pulls up, hops off the bike, rips off all her clothes, and says 'take what you want'."

The other engineering student nods and says "Good choice. The clothes probably wouldn't have fit."

QUOTE OF THE MONTH

“Be nice to nerds. Chances are you’ll end up working for one.”

-Bill Gates, quoted in the Denver Post

SUDOKU OF THE MONTH

Puzzle Difficulty: EASY

Fill in the puzzle so that every row, every column, and every 3 x 3 box contains the numbers 1 through 9. (Answer in next month’s newsletter.)

		9	4		3	6		
	8	2	6				1	
6				2			5	9
8				3			7	4
		6	2		1	5		
9	3			5				8
1	9			6				5
	6				9	7	3	
		4	8		7	9		