



The HVAC&R Industry, ASHRAE's free weekly eNewsletter for HVAC&R professionals, provides relevant, timely information about industry and technology for people who create healthy, comfortable indoor environments.

Industry News

Most Environment-Friendly Colleges Named

NEW YORK—The Princeton Review has released its third annual Green Ratings of colleges, which measure how environment-friendly the institutions are on a scale of 60 to 99. The Review tallied the rating for 703 institutions based on surveys of colleges concerning their environmentally related practices, policies and academic offerings. It also named 18 colleges to its "2011 Green Rating Honor Roll," a list of the schools that received the highest possible score. The Princeton Review also surveyed college applicants and parents of applicants. Nearly two-thirds of respondents said they would value having information about a college's commitment to the environment. Of that figure, 23% said such information would "very much" impact their decision to apply to or attend a school.

'Thermally Elastic' Metal Could Replace Refrigerants

COLLEGE PARK, Md.—A new "smart" metal could replace the liquid refrigerant in air conditioners, according to researchers. The University of Maryland scientists say their "thermally elastic" metal alloy's solid-state cooling technology would increase the efficiency of energy use by as much as 175% and reduce U.S. carbon dioxide emissions by 250 million metric tons per year. A 0.01-ton (0.04 kW) prototype is being tested to see if the technology is commercially viable for space cooling applications.

First LEED Gold-Certified Prison

CONNELL, Wash.—A prison in the Seattle-Tacoma area has become the first prison in the world where the entire campus is LEED certified. Coyote Ridge Corrections Center achieved LEED Gold for the energy-saving measures incorporated in an expansion project that began in 2008. The prison also uses low-flow fixtures to decrease water use. Its laundry recovers heat and water. The facility also has solar panels. The exact energy savings at Coyote Ridge is uncertain because all the units will not be open until Aug. 16.

Back to Drawing Board for Failed Sustainable Project

SHAKOPEE, Minn.—A failed attempt at making transit greener in a Minneapolis/St. Paul suburb is being made less sustainable in order to salvage some use of the project. Scott County's first transit station, which opened three years ago, was billed as "eco-friendly" for its paving bricks and rain gardens. It turned out to be a \$50,000 mistake. The porous pavers, designed to drain pollutants into the soil rather than sweep them off into nearby bodies of water, sank under the buses' weight. The rain gardens turned into a decaying, weed-infested mess. Attempts to replace the pavers proved costly and temporary. Therefore, the local transit agency decided to scrap the idea and replace the pavers with traditional concrete. The rain gardens are to be replanted with a weed-resistant fabric liner.

Skyscraper With 'Interlocking' Units Under Way in Mexico

MEXICO CITY—Construction has begun on a new skyscraper in the bustling Reforma Street area of Mexico City. Called R432, the mixed residential and commercial use building combines 12 plots of land and will top off at 52 floors. The interior will be divided into 70 m² (753 ft²) units that can be joined horizontally or vertically to create differently-shaped units. Interior units can occupy multiple levels and provide varying views.

Calgary Building Under Construction to be Tallest In Canada Outside Toronto

CALGARY, Alberta—A Calgary skyscraper under construction will be the tallest building in Canada outside Toronto. The Bow Tower is expected to top out at 58 stories and 218 m (728 ft). Two energy companies will share the 186,000 m² (2 million ft²) building upon

its completion in 2012.

ASHRAE News

ASHRAE Seeks Inclusion of Standard 189.1 in Federal Building Requirements

ASHRAE is attempting to get Standard 189.1, Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings, included in requirements for federal building design. ASHRAE Vice President Ross Montgomery recently testified at a U.S. Department of Energy (DOE) hearing on proposed rule making on energy efficiency and sustainable design standards for new federal buildings and major renovations of federal buildings. "From site location to energy use and recycling, this standard will set the foundation for green buildings through its adoption into local codes," he said. "ASHRAE strongly believes that Standard 189.1 can help meet many of the federal government's building needs."

ASHRAE's *Cook With Cold* a Resource for Culinary Coolness

The modern residential refrigerator was not widely available until the 1920s. To spur sales, manufacturers promoted the usefulness of household refrigerators by offering booklets of recipes that required refrigeration as part of the preparation. ASHRAE published *Cook with Cold: Old Tyme Refrigerator Recipes*, a collection of more than 100 recipes for cocktails, salads, breads, sauces and dressings from the formative years of household refrigeration. With a large portion of the United States currently experiencing an unusually hot summer, the book is receiving renewed interest after its initial publication in 2005.

Feature of the Week

Electronic Expansion Valves vs. Thermal Expansion Valves

By Renato Lazzarin, Daniele Nardotto, and Marco Noro, Ph.D.

Thermostatic expansion valves (TEVs) are the most widespread expansion devices, but they have some characteristics that can limit their versatility and performance. For example, TEVs require a minimum pressure drop between condensation and evaporation. To evaluate the possibilities of using electronic expansion valves (EEVs) versus TEVs, a large supermarket in Italy was retrofitted with the EEVs installed in parallel with TEVs to operate the plant alternately with the two technologies.

Product News

Geothermal Design Software From Heat Controller/Comfort-Aire

JACKSON, Mich.—LoopLogix software from the Comfort-Aire brand of Heat Controller enables contractors to design geothermal loops, prepare reports and presentations, and create a bill of materials for the system selected. The software checks pump sizes and Reynolds numbers for the loop, and compares up to six systems for annual use and estimated payback. It is designed to be easy to use. Users need only fill in blanks for variables.

Distributed Secondary Loop System From Hussmann

BRIDGETON, Mo.—Hussmann introduces the Protochill distributed secondary system, designed to require less refrigerant charge than traditional secondary systems in medium-temperature supermarket applications. The system uses the company's Protocol HE platform in conjunction with an integrated pump and heat exchanger package to provide improved energy efficiency and lower construction costs.

Air-Handling Unit From CES Group/Ventrol Air Handling Systems

ANJOU, Quebec—Ventrol Air Handling Systems, a CES Group company, introduces the model VFCU 500 cfm to 20,000 cfm (236 L/s to 9400 L/s) air-handling unit. The unit features FANWALL technology, which optimizes fan wheel geometry and motor horsepower for specific applications. This results in smaller, quieter fans and motors that run closer to peak efficiencies.

Subscription Management

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