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# RADIANT & HYDRONICS

## E - N E W S

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**Radiant & Hydronics e-News week ending January 12, 2007**

### New Year Resolutions

Time to trim the fat, and we don't mean from your waist size (although that shouldn't get out of hand, either). Take a good hard look at your inventory and how you organize your warehouse, service trucks, desktop, break room, etc. See some room for improvement? Get a jump on Spring Cleaning, and make your New Year's Resolution to work a tighter, more efficient shop in '07.



In this issue of **Radiant & Hydronics e-News**:

- [Another installment of The Glitch & The Fix](#)
- [New Products to watch for this year](#)
- [News you can use](#)

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**ESTIMATION** TEAMS UP WITH **MICROSOFT** at the AHR EXPO 2007



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### Industry News

#### Caleffi Launches Educational Journal

[Caleffi Hydronic Solutions](#) launched *idronics*, a new educational journal written by engineers and oriented towards innovative design techniques. The publication is intended for hydronic professionals to aid in system design, component application and selection. The first issue, due out this month, addresses the increasingly important topic of "Hydraulic Separation." This inaugural edition will be distributed to the approximately 80,000 subscribers to *Plumbing and Mechanical* and *PM Engineer* magazines.



#### Costs Plunge In November, But Don't Cheer Yet

The [Bureau of Labor Statistics](#) reported Dec. 19 that construction costs had plunged in November. Specifically, declines were visible in diesel fuel, plastic construction products, lumber and plywood, gypsum products, and steel and copper products. But, "as long as demand in industrializing countries remains

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strong, construction is likely to face higher costs for materials that depend on world markets," noted **Ken Simonson**, the AGC's chief economist. Visit [www.agc.org/podcast](http://www.agc.org/podcast) for further information.

### ICC, FEMA Partner For Seismic Design Guide

The [International Code Council](http://www.iccsafe.org) partnered with FEMA and the National Institute of Building Sciences to develop an easy-to-understand guide to help homebuilders, code officials, contractors and other non-engineers understand earthquake design requirements for homes. The *Homebuilders' Guide to Earthquake Resistant Design and Construction* is available by calling 800/786-4452 or visiting [www.iccsafe.org/builderseismic](http://www.iccsafe.org/builderseismic).

### Code Council Goes Green

[ICC](http://www.iccsafe.org) has also announced it will move its world headquarters into a Leadership in Energy and Environmental Design (LEED) certified building in the nation's Capitol. "Having our offices in a LEED-certified green building shows our corporate commitment to respect the environment. Green technology is going to play an important role in our collective future — not just in the United States but around the world," said Code Council CEO **Rick Weiland**.

### Volunteers Still Needed In Gulf

Volunteers of America is still seeking volunteers with professional craftsmen skills to help in the rebuilding of the Gulf States, which are still in critical need of assistance after Hurricane Katrina. Skilled trades persons are encouraged to spend their next vacation or down time in New Orleans, Alabama or Mississippi. For more information, visit the New Orleans Volunteers of America website ( [www.voagno.org](http://www.voagno.org)), or the Alabama and Mississippi site ([www.voase.org](http://www.voase.org)).

## Company News

### Bradford White Supports Industry

In 2006, [Bradford White Corp.](http://www.bradfordwhite.com) continued its industry support by again donating \$15,000 to the Plumbing, Heating, Cooling Contractors–National Association: \$7,500 went to the organization's Apprenticeship Program and another \$7,500 was earmarked for the National Auxiliary College Scholarship Fund.

### A.O. Smith: 2 Million Hours Without Lost-Time Accident

The [A.O. Smith Water Products Co.](http://www.aosmith.com) plant in Johnson City, Tenn., has been able to work more than 2 million hours without a lost-time accident. The 500,000-sq.-ft. facility manufactures residential water heaters and employs approximately 1,200 people. The company cites individual accountability, dedicated Safety Steering Committees and a program that integrates safety into all training activities as the recipe for its success.

### Boilers On Display

[RBI](http://www.rbi.com) will showcase the new Futera Fusion™ and the new 4 million Btu Futera III at the [AHR Expo](http://www.aahr.org) (Booth 1325), Jan. 29 -31 at the Dallas Convention Center in Dallas, Texas. The Futera Fusion is a commercial boiler, IBR-listed and up to 97.5% efficient to meet the changing demands of environmentally sensitive or

## Calendar Of Events

Jan. 16  
[RPACampus.com: Pumps, Distribution Piping & Controls](http://www.rpacampus.com)  
2 p.m. EST

Jan. 16  
[Dan Holohan's The Way We Were Night School](http://www.danholohan.com)  
Somerville, MA

Jan. 17  
[Dan Holohan's The Way We Were Night School](http://www.danholohan.com)  
Warwick, RI

Jan. 23  
[RPACampus.com: Hydronic Heat Sources](http://www.rpacampus.com)  
2 p.m. EST

Jan. 24  
[RPACampus.com: Radiant Basics Heat Load & Design Procedures](http://www.rpacampus.com)  
8 pm EST

Jan. 26-27  
[Nexstar's Money Masters®](http://www.nexstar.com)  
Columbia, SC

Jan. 29-31  
[AHR Expo](http://www.aahr.org)  
Dallas, TX

Jan. 30  
[RPACampus.com: Example Radiant Systems](http://www.rpacampus.com)  
2 p.m. EST

Jan. 30  
[HVACTV Live](http://www.hvactv.com)  
8 pm Eastern

Feb. 1  
[RPACampus.com: Introduction To Radiant Heating](http://www.rpacampus.com)  
8 p.m. EST

Feb. 6-9  
[Surfaces Exhibit & Conference](http://www.surfaces.com)

green building design.

## Oilheat News

### Oil Heat Retreat Returns

Mark your calendars for Sept. 13-16, 2007, to attend the second annual Oil Heat Retreat hosted by the [NAOHSM](#) at the beautiful [Red Jacket Mountain View Resort](#) located in the heart of the Mount Washington Valley of New Hampshire. Billed as a pre-heating-season getaway, it will give attendees a chance to mix and mingle, and wrap up the summer in style. To learn more about this year's event, call 888/552-0900, or e-mail [info@naohsm.org](mailto:info@naohsm.org).



**HYDROSYM** is a hydronic component symbol library for AutoCAD®, and AutoCAD-compatible drawing software. It contains 99 full-color, fully proportioned symbols based on the piping schematics used in the text *Modern hydronic Heating 2nd Edition* by John Siegenthaler, P.E. **For more information, go to [www.HydronicPros.com](http://www.HydronicPros.com).**

### Show

Las Vegas

Feb. 7-10

[NAHB International Builders Show](#)

Orlando, FL

March 6-10

[ISH Frankfurt](#)

Frankfurt, Germany

March 24

[Dan Holohan: Classic Hydronics](#)

Piscataway, NJ

March 27

[NORA Tank Certification](#)

SMO Training Facility Maryland

March 28-30

[HVACR & Plumbing Instructor](#)

[Workshop](#)

Landsdowne, VA

April 5

[Advanced Hydronic Heating Design Seminar with John Siegenthaler, P.E.](#)

Utica, NY

April 19-20

[2007 Foothills Hydronics Conference & Tradeshow](#)

Edmonton, Alberta



## Online Now

### A Brief History Of Radiant Heat



The Ancient Romans practically invented central heating with their version of underfloor radiant heating called a "hypocaust." Read about that and a few more early radiant heating innovations at the link below for a quick introduction to the History Of Radiant.

[Read the complete article @PMmag.com](#) *(site registration required)*



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### Did You Know ...

The population of the U.S. on July 1, 2006 totaled 299.4 million

That's up 1% from the year before, according to the Census Bureau. The fastest-growing state was Arizona, which grew 3.6%, followed by Nevada, 3.5%; Idaho, 2.6%; Georgia, 2.5%; and Texas, 2.5%. Population is a major indicator over time for where construction demand will change.

[www.census.gov/popest/estimates.php](http://www.census.gov/popest/estimates.php)

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### The Glitch & The Fix

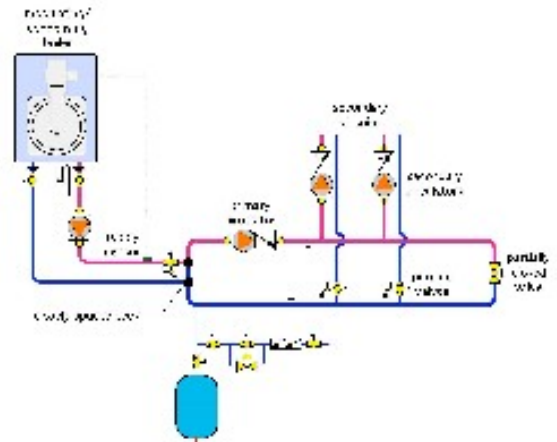
Here is your long-awaited "Fix" to the *PM* December issue's Glitch.

**Mod/Con Decision** ([click here for a full view of December's Glitch & The Fix](#))

**Overview:** An installer has decided to use a mod/con boiler with a high head loss characteristic and connects it to the rest of the system as a secondary circuit with its own circulator. The two load circuits require the same water temperature, so he connects them as shown.

**Exercise:** There are at least three incorrect details in this design. Can you spot them?

**Result:** The distribution system is neither a primary/secondary system nor a two-pipe parallel system. It's a "piping aberration." Assuming the "primary circulator" shown operates when either of the "secondary circuits" operates the pressure drop through the partially closed valve will cause a pressure differential between the top and bottom headers that's likely to force flow through a "secondary circulator" that's off when the other load circulator operates.

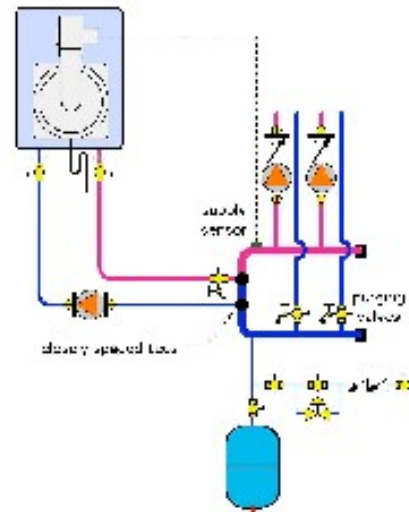


Other errors include the boiler circulator “sucking” through the boiler rather than pushing into the boiler (potential for steam flashing if boiler operates at elevated temperature).

The supply temperature sensor that regulates boiler modulation should also be placed downstream of the closely spaced tees to ensure it senses the final mixed temperature to the load circuits.

Finally, there is no need for a “primary circulator.” Simply connect the load circuits to a generously sized header as shown. Size the header for a flow velocity around 2 feet / second with all load circulators operating.

Visit [www.HydronicPros.com](http://www.HydronicPros.com) for further information.



## New Product Showcase

**Power Tubing Cutter:** Superior Tool Co.’s UltraCut™ cordless power tubing cutter debuts AnyFuel™ power technology, which makes it practical to create cordless versions of tools and appliances that have always been manual. Cut 1/2- or 3/4-inch copper with minimal burr in three seconds, with the last cut just as powerful and fast as the first cut. [www.superiortool.com](http://www.superiortool.com)



**New & Improved:** Bradford White offers two new products featuring a Vitraglas® coated, double-wall heat exchanger coil. The first, the Combi2™, provides home space heating and potable hot water from a single energy-saving source. The 50-gallon models come equipped with Bradford White’s Defender Safety System®. The new design of the PowerStor2™ indirect water heaters is super-efficient, and is the perfect mate for your boiler, heat pump or solar heating system. Supplies a first hour rating of 120 to 158 gallons per hour. [www.bradfordwhite.com](http://www.bradfordwhite.com)



**All-In-One Versatility:** Design, control and installation of radiant systems have been made much easier with the introduction of Taco Inc.’s all-in-one injection mixing system – the Radiant Mixing Block. It combines a variable speed injection mixing control, injection circulator, system circulator and air elimination into a single unit. With only four pipe connections required, it greatly reduces installation time, and affords substantial space savings. Can be set up as an outdoor reset control, a set-point control or a delta T limiting control. [www.taco-hvac.com](http://www.taco-hvac.com)



## Industry Links

- [Radiant Panel Association](#)
- [National Association Of Oil Heating Service Managers](#)
- [Canadian Hydronics Council](#)
- [Plastic Pipe & Fittings Association](#)
- [American Society of Plumbing Engineers](#)
- [GAMA](#)
- [HVACTV.com](#)
- [US Dept. of Energy](#)
- [ISH North America](#)
- [HeatingHelp.com](#)
- [HydronicPros.com](#)



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Also, tell us how we did! We'd love to get your feedback. If you have any comments or questions about this e-mail, please [write our editors](#) and let them know — especially if you have suggestions how we can better serve your interests.

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