

From The Exec. Director



Lawrence Drake
Exec. Director

**Members Make
The Association**

There is nothing more important to an association than its members. The basic function of an association is to serve the needs of its members. Any organization that loses sight of that basic fact is sure to fail.

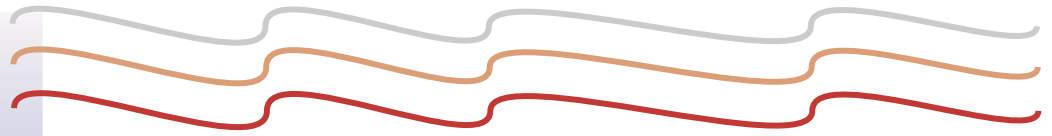
Having said that, there is responsibility in being a member of an association. An association cannot perform its charter if it doesn't know what its members want or need. It is vitally important that the membership communicate to the organization those issues that the members feel important and the actions they would like to see taken. Without this information, the staff and the Board of Directors have to make judgement calls solely on their own experience.

It is no secret that the best way to get the most value from any trade association membership is to get involved. So many decisions are made by so few. Members who get involved quickly discover that even a small voice can get big results.

In this newsletter, the Education Committee is looking for input. Nominations are also open for the RPA Board of Directors. Don't miss either opportunity.

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RADIANT PANEL REPORT

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Foiled Again

Understanding Reflective Insulation Under Slabs

by Lawrence Drake
RPA Executive Director

Extreme cold weather in the western and north central parts of the country have, once again, put the insulation of slab-on-grade radiant heating systems to the test. Reports have been coming in of poor performance and high energy bills on systems installed using reflective insulation under the slab.

missivity and therefore does not reject heat very well. This, of course, assumes that the metal, usually aluminum, is fully aluminum and not just a painted surface, and that it is highly polished.

Polished aluminum, like a mirror, is a reflector. Just like a mirror, if it gets covered with dust or the surface gets dull, its reflective properties are diminished. A reflective insulation must also have an airspace to function. If you press your hand up against a mirror, you won't get any reflection. If you push a warm surface up against a reflective insulation, you won't get any heat reflection either. In fact, the reflector then becomes a conductor of heat. On the other hand, properly placed in a joist space under a heated floor, reflective foil will perform as designed.



The promise of high R-values and more efficient heat transfer from a product that is only a quarter of an inch thick, easy to handle, flexible, and rolls out over irregular ground on the jobsite is very attractive. Too many contractors turn a deaf ear to the concerns about the actual insulation properties of foil in under-slab applications in favor of the ease of installation.

Before going any further, it should be recognized that foil does have its place. It can be very effective in restricting heat flow. It does this in two ways. One, it reflects long wave radiation. Two, it has low em-

The reflective surface becomes a conductor when in contact with concrete

On the back side, the side that is facing away from the heat source, polished aluminum is very poor at rejecting heat. This is a good thing when you don't want excess heat traveling down into the space below.

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www.radiantpanelassociation.org

Foiled Again... (continued from page 1)

You don't see many polished radiators, other than some decorative towel warmers. Polished radiators don't emit heat very well.

Neither the reflection nor the rejection attributes that make a reflective insulation effective in a joist bay are present in an under-the-slab application. Concrete comes in direct contact with the top surface of the reflective barrier, and the ground comes in direct contact with the bottom surface, making both surfaces conductors.

Some reflective insulation products use an encapsulated bubble or a thin layer of poly foam between the aluminum foil. While this does create a small air space, the material of the bubble or the foam comes in direct contact with the foil, rendering any airspace minimally affective as far as reflectivity is concerned. The primary insulation value derived from this sandwich of material when embedded beneath a concrete slab, is the air entrapped by the bubble or the foam. RIMA tests put a bubble foil R-value at about R-1.10.

Under-slab heat losses

In most cases where the ground is dry, the water table is deep, and there is no rock ledge or other solid formation to carry away heat, heat loss to the ground is minimal. Under-slab insulation may not be required or cost effective in many applications. On the other hand, perimeter insulation is a must. The closer the heated slab is to the outside and the shorter the distance through the ground heat has to travel to cold, the more insulation is required. This explains the cold weather complaints. If no perimeter insulation is applied, other than the reflective product, as the outside temperature drops, the spread between the warm perimeter slab and the outdoors drives the heat through the ground, through the footings, taking the shortest path to the cold. Downward loss under the slab in the center remains fairly constant.

Bottom line

Reflective foil under a slab, with no airspace, is totally ineffective as an insulator. Reflective foil with a bubble or foam core is only slightly more effective than the bubble or foam by itself. Be sure you understand the insulation qualities of the material you are working with. A bubble foil or bubble foam product can create a thermal break under a slab, but should not be substituted for effective slab edge insulation unless used in multiple layers to get an appropriate thickness.

Follow the insulation recommendations in the RPA Guidelines. Insulate the perimeter to below the frost line to at least the minimum in the following formula.

$$[\text{Inside Temperature} - \text{Outdoor Temperature}] \times 0.125 = \text{R-value}$$

Nominations Open

The RPA Board of Directors is made up of twelve members. Each year three members end their four-year terms and three new members are elected. Any RPA member may nominate any other RPA member to be considered as a candidate for election. It is easy to do.

Nominees must be willing to serve a four-year term, attend both online and in-person meetings, and positively support the mission of the RPA. For more information or to nominate a candidate, visit

www.RadiantPanelAssociation.org
and enter the Member area.
or call 970-613-0100.

Nominations close at midnight MST, March 1, 2007.



One of the best sources of information sharing around.

MONTHLY REPORT

- 1097 registered members
- 51,425 page views

TOP FIVE DISCUSSIONS

- Adjusting Wirsbo Manifolds
- InsulTarp
- Dry Sandwich Versus Gypsum
- Infloor and Hot Water Question
- Radiant Tank On Top Of DHW



FREE!

Go to

www.RadiantPanelAssociation.org
and click RadNet

Insulate below the slab if there is ground water or thermally-conductive subsoil to minimum of R-5. Use materials that have independent laboratory confirmation of R-values.

For more information on reflective insulation under slabs, visit the Reflective Insulation Manufacturer Association at www.rima.net.



NEW MEMBERS

Gold members go that extra mile to show their support for the industry.



**Members who joined between
December 16, 2006 and
January 15, 2007**

Wholesale Distributor
Mid-City Supply Co.
Elkhart, IN

Trade Associate
Rumsey Engineers
Oakland, CA



2007 System Showcase

Start now collecting photos and information for your System Showcase entry. Deadline is May 1, 2007.

Applications are now online at www.RadiantPanelAssociation.org or call (800) 660-7187.

This year's competition co-sponsored by Federated Insurance.



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RPA Board

Hard At Work In Dallas



Loveland, CO - While it may not be the suit and tie board room often portrayed in the media, RPA Board meetings are serious affairs with some good camaraderie thrown in to make it enjoyable. Board members attend because they are concerned about the future of the industry and the association. The day-long meeting in Dallas, TX, during the AHR Convention, was no exception.

Among the many orders of business, the board signed the newly adopted Code of Ethics for board members to ensure that the board not only meets the expectations of the membership at large, but conducts itself in a professional and responsible manner.

The board also reconfirmed the RPA's relationship with Teal International Corporation, the company that has managed the RPA since its inception in 1994, with a five year contract.

An aggressive new marketing plan was approved to better communicate the benefits of members and an increased focus presenting radiant as a "green friendly" technology was also directed. These topics and other made for a full and productive meeting.



**LIVE
ONLINE!**



your guide to radiant success

www.RPACampus.com

All you need is a computer and an Internet connection. If you have a mic, you can hold a conversation with the instructor and other students. If not, you can text message your comments and questions right into the school window. You can even pass notes to other students. Register today.

SCHEDULE

**REGISTER
NOW!**

February

Thu. 22nd - 8:00 PM EST

Tubing Components & Install

Thu. 27nd - 2:00 PM EST

Heat Load and Design Procedure

March

Thu. 1st - 8:00 PM EST

Pumps, Distribution Piping and Controls

Wed. 7th - 12:00 and 8:00 PM EST

**Radiant Cooling & Heating
by - Robert Bean**

Tue. 6th - 2:00 PM EST

System Documentation

Tue. 13th - 2:00 PM EST

Specifying and Sequencing

Wed. 14th - 2:00 PM EST

Mixing Theory & Calculations

Wed. 21st - 2:00 PM EST

Mixing with Valves

Wed. 28th - 2:00 PM EST

Mixing with Pumps

CLASSROOM COURSES

April

Thu. 19th - Radiant Basics Full Day

Fri. 20th - Radiant Precision Full Day

Questar Training Facility
Salt Lake City, UT

June

Wed. 20th - Radiant Basics Full Day

Pace Supply
Santa Rosa, CA



New England Rep and Tech Support Appointed

Shelbyville, KY January 16, 2007,
 – Hydronika is pleased to announce that Distributor Corporation of New England in Malden, Massachusetts will distribute and support the Hydronika product line in Eastern Massachusetts, Rhode Island, Maine and New Hampshire. “DCNE has a highly experienced organization with broad customer relationships in this part of the country. We are very pleased that they have chosen to represent Hydronika and we are looking forward to a long and mutually beneficial relationship” said Michael Scharing, CEO of Hydronika, Inc.

“Our customers demand for energy efficient heating and cooling equipment drew us to this product line. We pride ourselves in selling long lasting, high quality HVAC products that address safety and indoor air quality. Hydronika makes just such products.” Said Greg Kolligian, VP Sales & Marketing at DCNE. “We believe that this product will allow more architects, contractors and home owners to expand their use of hydronic designs thus elevating efficiency, safety and comfort in their building concepts. Hydronika brings commercial sized heating and cooling capabilities to the custom residential and light commercial market” says Mr. Kolligian.

Distributor Corporation of New England is located at 767 Eastern Avenue in Malden, MA 02148 and can be reached at: 800 347 8804.

Hydronika manufactures combination chiller-boilers for use in residential and commercial hydronic heating and cooling applications. For more information visit: www.hydronika.com



Review of 2006 and Outlook for 2007

KWD-globalpipe, 2007-01-09, No.225
 - During the year WINKLER TECHNIK saw a significant upturn in the market for under-floor heating due to the extreme fluctuations in primary energy costs, which have resulted in increased interest in renewable energy sources such as solar panels, wind turbines and heat pumps. Metal prices contributed too, demand coming not only from the renovation of residential accommodation and new building, but also from snow melting units. Presence at trade fairs throughout the world was also an important factor in making 2006 such a successful year.

The growth in the market for renewable energy sources in northern countries in particular led to interesting innovations. At the fair in Dublin, for example, a number of system suppliers selling heat pumps were also offering small wind turbine generators to produce the electricity for the heat pumps. This significant trend is apparent not only in Ireland, but also in England and the Scandinavian countries. Even the American market is coming round to this way of thinking. The prospects for under-floor heating in the coming year, therefore, look rosy.

As Winkler Technik’s figures show, rapid mounting rail are mainly used in domestic under-floor heating systems. But mounting rail technology is also becoming increasingly popular in industrial and open space under-floor snowmelting and heating applications.

Outlook for 2007:

Winkler Technik will exhibit in Russia for the first time at the Aqua-Therm fair



in Moscow and actively pursue the Russian market. Experience over the past year has shown that Central European, and particularly German, quality is highly regarded in Russia and many Russian companies are very cautious about using products from the Far East. Other markets, which Winkler Technik will be pursuing further in the near future, are Australia, Brazil, Central Asia countries, such as Kazakhstan, and the Middle East.

Contact: Winkler GmbH, info@winkler-technik.de www.winkler-technik.de



The 2nd International Radiant Floor Heating System and Construction Technology Expo & New Technical Seminar (RFHS EXPO 2007) will be held in Shanghai on 17-19, May, 2007.

The floor heating industry in China is just underway. China has a population of 1.3 billion and the total radiant area is up to 9.6 million square meters. With the development of China’s economy, people’s living conditions are becoming better so the requirement for heating in later years is huge.

With recent interest in China’s market by well known international corporations, the RFHS EXPO 2007 is held not only for the development of China’s floor heating industry, but also to improve international communication. For more information visit www.ccbwexpo.net/english.htm



AMTROL FILES CHAPTER 11

Warwick, RI - AMTROL Inc. and certain of its affiliates filed voluntary petitions for reorganization under Chapter 11 of the U.S. Bankruptcy Code on December 20, 2006. AMTROL took this action to complete a financial restructuring that will substantially reduce the company’s debt and greatly improve its long-term financial stability, according to a company spokesman.

The company wants to make sure its customers understand that AMTROL is not going out of business. In a letter to its suppliers the company stated, “we will continue to provide products and services to meet the needs of our customers.”

For more information, visit www.amtrol.com or call 401-884-6300

Name Your Radiant Allstar



RPA Annual Conference To Recognize Radiant Heroes

Loveland, CO - There are countless heroes in the world of radiant, most of which are unknown except in their immediate circle of friends and customers. The RPA intends to remedy that at the upcoming International Conference in Hartford, Connecticut, August 22 through 24. This is the official return of REX, the RPA's international conference and trade show dedicated solely to the radiant heating and cooling industry.

We will be seeking "Allstar" candidates in a number of categories and will look to our members to provide help in identifying worthy individuals. These are not necessarily the headliners in the major trade magazines or noted conference speakers. These are the people who work in the field, day after day, promoting radiant technology.

Along with categories like FIRST RPA MEMBERS, which are easily identified, we want to find Allstars responsible for categories like the following:

- EARLIEST RADIANT INSTALLATIONS
- LARGEST RADIANT HEATING SYSTEMS
- LARGEST SNOW MELTING SYSTEMS
- LARGEST RADIANT COOLING SYSTEM
- MOST RADIANT SYSTEMS INSTALLED
- MOST OUTSTANDING MEMBER IN EACH RPA CHAPTER
- EARLY RADIANT TUBING SUPPLIERS
- EARLY INDUSTRY TRAINERS

Hall of Fame

A Radiant Allstars Hall of Fame will be displayed in the System Showcase exhibit on the REX show floor. The stories of selected Radiant Allstars will be displayed along with their picture. Special badges of honor will be given to those Allstars in attendance.

Great Program Planned


The program for the return of REX is coming together very nicely, thanks to all the input we have received from our members. There will be technical seminars on "Green" topics like ground source heat pumps and solar. John Siegenthaler will be addressing Low Powered Hydronics and the new pump technology coming out of Europe. Whole House Automation will be a topic presented to take a look at the opportunities to integrate radiant with the electronic house. One seminar will focus on Energy Consumption Comparisons of radiant versus other forms of heating. Of course, Radiant Cooling seems to be on everyone's mind and will be highlighted at REX. There will also be seminars on the business and marketing side of the radiant industry and a whole lot more.



In keeping with the Allstars theme, Walter Davis, one of the highest scoring NBA players, an Olympic Gold Medal winner, six-time Allstar player, and a nominee to the Basketball Hall of Fame, will speak at the General Session on what it takes to be an Allstar Player.

He will also join us on our First String River Cruise Thursday evening. Mark Matteson will address the assembly as well. Mark is an author, columnist and motivational speaker who has come out of the mechanical contracting business. He understands the challenges of creating a successful heating business, the importance of customer service and the essentials of a well balanced personal life. Mark is a returning speaker to REX. His was well received at the 2003 REX in Sacramento and we are pleased to welcome him back again.

Winning Trade Show

The REX Trade Show is also stacking up to be an exciting affair. Many new companies with new products are signing up along with our loyal regulars who also have many new and improved technologies to exhibit. There is no doubt that REX is the show to attend for exposure to radiant related products, both hydronic and electric. The exhibit hall will be populated by two hundred booths with the Radiant House and the System Showcase pavilion at its center. If you are in the radiant industry, you don't want to miss REX 2007. 


Input Wanted For Education

Dorothy Castagna-Biggs
RPA Education Committee Chair

In 2006 the RPA started a campaign to update their education program, with a focus on making the program more user friendly, and reaching out to all levels of expertise in the radiant industry. The RPA Board of Directors has designated a committee to reevaluate the current offerings and make recommendations on needed changes in order to keep up with current trends in the industry.

One initiative in particular that the RPA is very proud of is the new live online seminars, which has been directed by Larry Drake and his staff. Some of the most respected authorities in the industry are instructors for these online training modules. Robert Bean, Alan Deal, Bud Hagen and Bob Zima. In addition, many of the classes are free for members, and reasonably priced for non-members. In addition, the "Radiant Precision," and "Radiant Basics" manuals are scheduled to be updated.


The RPA and the Board of Directors are committed to the continued development of the education program but we realize in order to be successful in our effort, we must reach out to the membership and request your input and help. The education committee needs professionals in the radiant industry to donate their time and ideas to help make our education program the best in the industry.

Please contact Dorothy Biggs @ (315) 546-3374 or by E-mail at Dorothy@dcbenterprises.com. 



Have You Been Rewarded?

Earn a stainless steel char-broil grill, an infrared thermometer or select from many other prizes. These are your personal rewards for your involvement in the RPA.

Log in to the Member area of the RPA's website and download the Radiant Rewards Catalog. Check out how you can earn some great products. You may already qualify for prizes. 



RADIANT PANEL REPORT

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INSIDE



Foiled Again



International News



RPA Board Nominations

RPA BOOKSTORE

RPA Guidelines 2004	21.30
member price	11.30
Radiant Architecture Book	26.25
member price	21.25
Radiant Basics Book	43.25
member price	39.35
Radiant Basics 2-CD set	125.00
member price	75.00
Radiant Basics Home-Study Outfitters Pkg.	299.00
member price	199.00
Radiant Precision Book	43.25
member price	39.25
Radiant Precision 1-CD only	125.00
member price	75.00
Radiant Precision Home-Study Outfitters Pkg.	275.00
member price	180.00
RadPad System Sizing Calculator	20.20
member price	17.20
Modern Hydronic Heating	99.95
member price	89.95
Hydronic Design Studio CD	285.00
member price	256.50

prices include postage • add \$4 per order for handling

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