



*Everyone at Environmental Technology, Inc. wishes you a happy holiday season!*

## Sno-Talk

In previous issues, we spoke of a snow event as the interval between the beginning and end of a snow period. The strength of such an event is the water equivalent of the snow that fell during that period. The energy required to melt the snow and evaporate any un-drained melt water is measured in kilowatt-hours or BTU's. The ideal rate at which melting occurs is determined by the number of watts per square foot or BTU's per hour-square. Snow often falls at a rate faster than the heaters can melt. Fast enough to cause accumulation because there is insufficient power to melt the snow as it lands and to evaporate the standing melt water.

This issue, our Sno-Talk column explains the operation of ETI's new patents pending Melt Track<sup>TM</sup> introduced in the new LCD-7 and planned for use in all future aerial snow sensors and controllers. One of Melt Track's important benefits is the substantial narrowing of the gap between the best possible energy efficient and truly unattended automatic control.

Before Melt Track, deicing heaters had to operate for the hold-on time after snow stops to ensure dry pavement. In controllers intended for small

installations, a fixed interval of five hours ensures good performance under nearly all conditions. Control systems intended for larger installations allow adjusting the hold-on time for up to ten hours. The hold-on time feature often wastes energy to ensure reliable snow melting. Incomplete melting is often worse than doing nothing at all!

Again, prior to Melt Track, aerial snow sensors universally determined when snow stopped, not when snow melting was complete. At low ambient temperatures, moisture sensors used 300 watts per square foot, or more, to ensure snow detection. Since this greatly exceeds the pavement watts per square foot, the deicing heaters could turn off before complete melting and clearing.

Melt Track reduces the hold-on time to just one hour. It accomplishes this by using the same number of watts per square foot for both the moisture sensor and the snow melting heaters. So, snow melts and clears on the sensor at about the same rate as the pavement. Thus, both clear at close to the same time.

In summary, Melt Track increases energy efficiency by reducing the hold-on time to just one hour. Melt Track simplifies the user interface by eliminating the need to adjust the hold-on time.

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## The Interface Goes Online

No more mailing it as in the past. The Interface will now only be published online at <http://www.networketi.com>. All the articles from the interface will be available on our website along with other News, Applications Bulletins, White Papers and more.

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## Code Corner

Conductor Insulation. Table 310.16 identifies the maximum conductor current rating based on a maximum conductor insulation temperature. The National Electrical Code for building construction recognizes three temperature ratings 60° C, 75° C and 90° C. The question is which temperature rating is correct for circuit conductors? The simple answer is identify the temperature limitation of the device you terminate the conductor in. NEMA, National Electrical Manufacturer Association, typically uses the 75° C rating for most devices. Next time your in the local DIY center visit the electrical department and look at the switches and receptacles. Listed with the device labeling is a temperature rating. Care must be taken not to use a conductor insulation rating greater than the temperature rating of the device.

Where the temperature limitation of the device is unknown the National Electrical Code provides direction that will insure wiring safety. Article 110.14(C)(1)(a) defines termination provisions of equipment for circuits rated 100 amperes or less...use insulation rated 60° C. Similarly, 110.14(C)(1)(b) defines termination provisions of equipment for circuits

rated over 100 amperes...use insulation rated 75° C.

Selection of the proper conductor insulation is vital to circuit survival. Circuits fail when a conductor with 90° C rated insulation are allowed to conduct their maximum rated current while terminated in a device rated 60° C. The termination point prematurely fails and generates enough heat to start a fire. This event is the cause of many electrical fires annually.

## It's Show Time Folks!

To fuel our appetite for continued growth and go after new business, we have decided to show and tell our ware and exhibit at three industry trade shows in the first quarter of 2004. More shows, that merit added value and a fit to our marketing plans, are being considered for later in the year.

Here's the schedule of the first three at a glance:

1. International Business Show (NAHB) — Jan 19-22 — Las Vegas, NV — Booth # S8679.

2. Surfaces Expo — Jan 28-30 — Las Vegas, NV — Booth # G3659.

3. Midwest Builders Show — Mar 26-26 — Rosemont, IL

First is The International Builders' Show, the largest annual construction show in the world, to be held at the Las Vegas Convention Center in Las Vegas, Nevada — billed as "the one site that has it all". More than 90,000 visitors, 1500 exhibitors, from 95 countries, all there to for the same reasons you should be: to see the latest in building products and technologies, to network and to learn.

Next, is the Surfaces 2004 Expo, again in Las Vegas at the new Sands Expo and Convention Center, just off the "Strip." This show offers three powerful days of 938 exhibitors, in 500,000 square feet of space, showcasing just about all of the latest products and services in the floor covering industry. Come and see everything you can imagine! Be part of the energy and excitement of the floor covering industry's main event.

Then, it's the Midwest Builders Show and Conference in Rosemont, IL at the Stephens Convention Center. Pretty much in our back yard when compared to the Vegas shows. Even though this show is smaller and more regional in nature than the IBS, it will still provide many opportunities for us to take advantage of. The same goes

for those attendees who didn't get to the IBS in Vegas.

## Show Invitations

We would like to encourage and invite you to attend any of these shows. As ETI has been allotted a limited number of show passes, we intend to distribute them to our customers on a first-call-first-served basis. So, please call your ETI sales rep for details and mark your calendar accordingly.

If you are not planning to visit the show, you should at least visit the show's website [www.buildersshow.com](http://www.buildersshow.com) and glean all the information you can.

ETI will be exhibiting in booth #S8679 and as a website show advertising exhibitor we are privy to invite as many guests as we like by giving them free passes to see all the exhibits! We won't be sending them in the mail; however we are going to tell you how to get them. You may register to get your free passes to see all the exhibits at the IBS by visiting this website: <http://www.BuildersShow.com/vip/>.

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