

Lead Risks Are Real

Thank you for the story “Lead-Safe Remodeling” (9/04). Unfortunately, while some overreact to this subject, many do not take it seriously enough. I should know, because I’m one of the latter.

One month ago, my child was diagnosed with a high lead blood level, caused by excessive dust from our own home renovation and exterior painting project. I personally supervised a very dust-conscious and clean workplace, following all the usual common-sense tactics. But I did not create true barriers, did not use a HEPA vacuum, and did not wash surfaces thoroughly.

Although my daughter’s condition is not likely to cause life-altering damage, it is bad enough to cause this father to feel extremely guilty and to immediately rethink how I approach environmental issues. While we as builders should not overreact to these issues, we should never dismiss them as “crazy environmental nonsense” or think that these problems are somebody else’s to worry about. These problems are right here in my own living room, in my air, and on my baby’s hands.

Hopefully, others can learn from my mistake.

Anonymous
New York

Effective AC for Humid Climates

Mr. Akers did a great job of covering many of the critical elements in his article “Air Conditioning for Humid Climates” (10/04). I would like to add a couple of comments.

Almost all of the humidity control techniques that Mr. Akers discussed can result in colder supply air temperatures. The result can be condensation on supply registers that get “super-cooled” while the system is running, and end up below the dew-point temperature of the room air when the system shuts down. Blowing this cold air directly on a surface can also result in condensation on, for example, the back of a dresser, the

underside of a table, or clothes in a closet. I also see problems when two zones on the same system are set to very different temperatures.

In solving moisture issues, we often end up using auxiliary dehumidification systems. An AC load in an actual house in Charleston, S.C., is 47,000 Btu/hr of sensible (heat) and 7,000 Btu/hr of latent (moisture) in the middle of the afternoon when it is 92 degrees out, but only 1,000 Btu/hr sensible with the same 7,000 Btu/hr latent load first thing in the morning when it is 75 degrees outside. (The temperature of the outside air has changed, but the amount of moisture in the air has not.)

To attempt this with AC equipment, we tailor things as outlined by Mr. Akers. We basically make the supply air colder, which removes more moisture but cools the house a little too much. Some AC controls limit overcooling to 3 degrees below the thermostat setting, but at 3 degrees colder we need to remove even more moisture to get to our desired relative humidity level. And at some low fan speeds, we don’t get good mixing of the air, which leads to other issues.

Most of the time we luck out and the outside temperature jumps up, so we get more sensible load. But in spring and fall, and on rainy or cloudy summer days, we can get extended times with a high moisture load and minimal sensible load. Under those and other part-load situations, I find it much more effective to add in a whole-house dehumidifier. Today’s AC equipment is great at controlling inside temperatures. A dehumidifier is great at controlling humidity. With both, we can actually really control temperature and humidity.

Craig DeWitt, P.E.
RLC Engineering
Clemson, S.C.

Stray Voltage Problem Resolved

Reading the article “Stray Voltage Zaps Homeowners” (10/04) was like reading my own story. I have an in-ground

swimming pool that was installed in 1990, with everything done to code. Over the last six years or so, we noticed that when swimmers touched both the pool water and the reinforced concrete deck around the pool or the pool ladders, they would get a little electric jingle, felt primarily at the surface of the pool water. It was not overly uncomfortable, but, needless to say, water and electrical shocks make people uneasy. I dreaded closing the pool each fall because as I would blow the lines out to seal them, the concrete deck would get wet, and as I lay on the wet concrete trying to cap the return lines, my arm would tingle from the electric shock.

I talked to electricians on numerous occasions and had an electrician review the system; the pool wiring checked out. We talked to the power company several times and they always stated that our wiring system was at fault. What confused me was that even after pulling the circuit breaker for the pool, I would still receive the jingle.

Finally, someone from the power company agreed to come and look things over. Lo and behold, they found there was a problem with their transformer setup at my power pole, which is 200 feet from the house. I have underground cable from the pole to my service entrance. They sent someone back the following day, made a quick and simple change, and my stray-voltage problem disappeared. It was a confusing, frustrating problem that lasted for more than six years, but thankfully it is now gone.

The article leads me to think that the situation may have developed over time because of the growth that my local town has seen over the last 10 years. The power demands are now substantially larger than they were when the pool was built, and that may have been the source of the stray voltage.

Jay S. Meunier, Estimator
Pizzagalli Construction
South Burlington, Vt.

Code Correction

In the article “Resisting Tornado Damage” (10/04), the drawing on page 147 indicates that the 2003 IRC requires trusses to be connected to the top plate with two 16d toenails. But Section R802.10.5 requires that trusses be connected to the top plate with approved connectors having a resistance to uplift of no less than 175 pounds.

Kurt Albrecht
Green River, Wyo.

Supporting Safety

Thank you for bringing to the attention of your readers the importance of building to the requirements of the International Residential Code and local codes. Your October 2004 articles “Hurricane Charley’s First Lessons,” “Hurricane-Rated Windows,” and “Resisting Tornado Damage” demonstrate two major benefits of building to code: saving lives and reducing property losses. Unfortunately, too often the perception of codes is more in line with your article “Amid Apprehension, Code Comes to Pennsylvania.”

Congratulations on a great issue and thank you for your support of building safety.

James Lee Witt, CEO
International Code Council

Energy Ratings of Impact-Resistant Windows

I read the October article on hurricane-rated windows with interest. The article never mentioned the energy performance of these windows, other than that some add a second layer of glass. Are they available with low-E coatings? What sort of NFRC ratings for U-value and solar heat-gain coefficient do they carry? What are the cost implications of these enhancements and how available are they?

Richard Faesy
Vermont Energy Investment Corp.
Bristol, Vt.

Author Charles Wardell responds: While all impact-resistant windows have to meet state and local energy codes, many companies go beyond the minimum requirements. According to Bill Lazor of Simonton Windows, for example, all of that company's impact-resistant units can be ordered as Energy Star-compliant anywhere in the country. They are available with a hard-coat low-E coating. The U-value for a double hung is .33 (total unit value, not center of glass); the solar heat-gain coefficient is .99. For typical units, energy enhancements might add around \$20 per window.

Cupped LVL

In the August 2004 *Products*, there was a product evaluation conducted on the FastenMaster TrussLok screw manufactured by OMG of Agawam, Mass., which was developed specifically for engineered wood products. The article indicates that the screws work well to pull cupped LVL together. Although this may be true, this practice is discouraged and should not be promoted.

Cupped wood is often caused by a difference in moisture content from one side of the wood to the other. Using screws or bolts to flatten or pull cupped wood members together induces cross-grain stresses, which can cause splitting. Cupping can be reversed by allowing the moisture content to equalize, but this is not always practical. Proper handling and storage will reduce cupping.

Michael Collins, P.E.
Trus Joist
Boise, Idaho

Of Mice and Cats

Regarding the Q&A “Mice and Insulation” (10/04): Get a cat, or maybe two, if it’s a real problem (two will keep each other company). You don’t have to really love them that much; think of them as “working cats.” Like a cattle dog or milk cow, they’re there to do a job.

If after a month you still have mice, you’re feeding the cats too much cat food. Don’t feed them milk or canned cat food; stick to the dry cat food. Cats don’t need to come indoors, either. They’ll solve the problem before it reaches the house.

Johnny Lawrence
Rocky Mount, Va.

Radon Help

Paul Fissette gave a good answer on where to find information about radon and fixing radon problems (Q&A, 9/04). At the site Paul mentioned, www.epa.gov/radon/pubs/, there’s a good publication, “Building Radon Out,” that describes how to prevent radon problems in new construction. This is important, because it’s more difficult and expensive to fix a radon problem after the fact. The booklet is full of great information, architectural drawings, and step-by-step illustrations, and is available for free.

Mike Rogers
Waterville, Maine

Bore Buster Price Correction

Unfortunately, the \$500 price for the L.J. Smith Bore Buster kit quoted in the article “Stair-Building Tools” (12/04) is a wholesale price. You’ll have to check with your local suppliers for retail sales. The kit comes in a couple of versions starting at around \$900 — a big investment unless you do a lot of stairs. — The Editors

KEEP ‘EM COMING!

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