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BPA INTERNATIONAL

JLC's

# Letters

## Bonding to Gas Lines

To the Editor:

The article "Electrical Code Update" (7/99) was quite informative, but the point on bonding of gas pipes needs further explanation. When the utility providing gas service to an occupancy uses a dielectric union, then gas piping must be bonded in accordance with *NEC* 250-104 to ensure that piping inadvertently energized has a continuous path of equal potential to the electrical system ground for clearing of faults and personnel protection.

The problem occurs when the installing utility does not provide a dielectric union. In my local area, the utility will red-tag gas equipment if bonding is installed by the electrician. According to my local inspector, this is because when the dielectric union is left out of the system and a bonding jumper is installed, the gas piping has the possibility of becoming a sacrificial anode and deteriorating more quickly.

For more information on grounding and bonding, readers can consult the *Soares Book on Grounding*, published by the International Association of Electrical Inspectors in Dallas, Texas ($33, 800/786-4234). The IAEI also runs seminars around the country on code changes, grounding and bonding, and residential electrical systems, among other topics. IAEI membership is also an excellent way for electricians and GCs who want to stay on top of their game to keep abreast of changes in the *NEC*.

Paul Hamilton
Spring Grove, Pa.

## The Wright Stuff?

To the Editor:

The article "Fallingwater Succumbing to Gravity" (*Notebook*, 11/99) seems to conflict with a book on Fallingwater and Frank Lloyd Wright by Robert McCarter.

Mr. McCarter states that the deflection in the flooring was due to "twice as much steel as was called for on [Wright's] plans." You state that it was due to the fact that the "original design did not call for adequate steel." The book blames the excess steel error on the contractor, engineer, owner, and an apprentice living on the site. Your article blames Wright, whose design was not followed in his absence. Who is correct?

Geoff Kremser
Arlington, Tenn.

JLC Notebook *editor Jon Vara responds: The Western Pennsylvania Conservancy, which owns and operates Fallingwater, recently hired the structural engineering firm of Robert Silman Associates to evaluate the cracked and sagging first-floor slab and develop a plan for repairing it. According to Silman engineer John Matteo, the problems are clearly the result of too little reinforcing steel, rather than too much. Radar imaging of the slab confirmed that the contractor had installed 16 lengths of one-inch rebar, rather than the 8 lengths called for in Wright's original plans. Evidently, the contractor recognized the weakness in Wright's design and attempted to remedy it by adding more rebar, but it was still not enough. The imaging also revealed no voids or other discontinuities in the concrete — putting to rest speculation that the structural weakness resulted from the failure of the concrete to fill the spaces between reinforcing bars.*

*Matteo also notes that the site-mixed concrete itself has a compressive strength of about 5,000 psi, as determined from recent core samples. Finally, the idea that the weight of the additional reinforcing steel might have caused the slab to crack is*

*clearly absurd. "In a cantilevered slab that weighs 900 pounds per lineal foot," Mateo says, "the weight of eight extra lengths of one-inch reinforcing rod is negligible."*

*The only question that remains, in fact, is where the discredited "excess steel" theory came from in the first place. Is it possible that Wright himself concocted it to explain away the ensuing structural problems? It's a question that brings a pause and a small, polite laugh from John Matteo. "I have no idea," he says.*

## Vinyl Siding a Beautiful Thing

To the Editor:

An "Offcut" in November's *Notebook* section refers to a *Time* magazine survey which lists vinyl siding as one of the 100 worst ideas of the century. Having worked for a vinyl siding company and now employed by a fiber-cement siding company, I'm suspicious of the background of the voters. I read *JLC* religiously, as I feel it's the only true publication for the contractor. I've never spent much of my time reading *Time*, and can't say I could label their demographic. I would say, however, that vinyl siding, when installed correctly, can be a beautiful thing. The major downside of vinyl is that you only notice the bad jobs; good jobs typically go unnoticed.

Rick Lappin
via e-mail

## Truly Ugly

To the Editor:

With their unanimous vote (*Notebook*, 11/99), the members of the Portland City Council have confirmed what we in the building industry have known for a long time: Snout houses are butt ugly. Why do you think we substitute french doors for garage doors in our model homes?

Ordinance or not, we always have to get the support of local residents for infill building projects. That almost always means a design that minimizes the garage.

R. John Anderson
Chico, Calif.

## Vinyl Siding & Housewrap

To the Editor:

Regarding the item "Vinyl Siding Without Paper?" (*On the House*, 11/99), the 1998 supplement to the BOCA code does indeed require felt behind vinyl siding. The local building inspector can permit a housewrap to be substituted for the felt, and usually does. However, much of the vinyl (about half in our area) is installed without it.

In our inspection business, we use a siding zipper to pull a piece of siding to check. On two new houses where we found this problem, the builder required the siding subcontractor to remove the siding and install it properly over housewrap. Getting the workers to install the housewrap over the flashings rather than behind them is still a problem.

Hank Spies
via e-mail

## Roof Algae Solution

To the Editor:

In the article "Algae-Resistant Shingles" (*Notebook*, 10/99), reference is made to a solution that can be used to remove algae stains from asphalt or fiberglass shingle roofs, but the formula for the solution is not given. It is important that not only the proportion of the ingredients be correct but that due caution be taken to protect other surfaces.

The formula is three parts fresh Clorox bleach to one part water, to which is added half a cup of TSP (trisodium phosphate) or TSPPF (phosphate-free) per gallon. Spray it with a garden sprayer on the affected areas at the rate of one gallon per 50 square feet of roof.





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This must be done with caution as this mixture will kill vegetation and cause harm to metal gutters. All plantings below the roof should be thoroughly wetted and covered with plastic. Water must be kept running in metal gutters to dilute and wash away the solution as long as it is dripping into them.

Thoroughly rinse the plastic, the surrounding area, and any vegetation when you have finished spraying the roof. Don't rinse the roof, however. It will take a few weeks before the algae stains are gone.

When cleaning a roof, care should be taken to minimize walking on or abrading the roof shingles. Cleaning a roof with bleach and TSP is effective but not permanent. In humid areas where roof algae is common, the algae may return as soon as one year after cleaning.

Henri de Marne
Waitsfield, Vt.

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