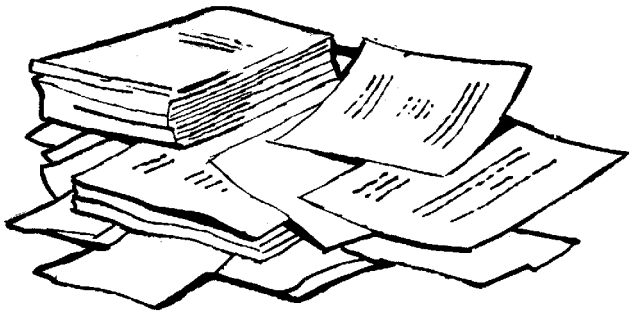
Letters



Facts About Foam Plastics

To the Editor:

I read with great interest your February article on stressed-skin panels where author Alex Wilson compares isocyanurate (Iso) and expanded polystyrene (EPS) insulations. While I agree with a number of his assertions, I wish to clarify and expand upon some points in his article.

First, it is evident that Mr. Wilson has not visited an EPS manufacturing plant, for had he done so he would have seen a much more complex manufacturing operation than he would have your readers believe. Manufacturing EPS blocks and panels is far more complicated than pumping two chemicals from 55 gallon drums, as is generally the case in manufacturing isocyanurate products.

Second, Mr. Wilson speaks of lower R-values for EPS (R-4.17 at 40°F and R-3.85 at 75°F), yet completely fails to mention the cost per "R" received for the dollars spent. If you take into account the thermal drift of the chlorofluorocarbon blown products (as Mr. Wilson points out, R-6.5) the cost/R for those products dramatically *increases.*

It should be pointed out that EPS is the *only* foam plastic not required to report an aged R-value, as it is not dependent on low-conductivity gases, but merely contains stabilized air within its cellular structure.

Third, Mr. Wilson addresses some of the physical properties of 1.0 per cubic foot (pcf) EPS, but ignores the fact that any core density up to and including 2.0 pcf is available for EPS panels. For example, 2.0-pcf-density EPS has a compressive strength of 33 psi—the same as urethanes and Iso's. We have found, however, that higher-density EPS and Iso panels do not perform as well under ASTM E72 test procedures as panels with 1.0-pcf cores. If there were significant benefit to producing 2.0-pcf panels, EPS panel manufacturers would do so, just as Iso manufacturers would produce a 1.0-pcf core if their technology permitted it. Unfortunately, by doubling the EPS density, we do not double the R-value. However, if a customer wants a 2.0-pcf panel core, he can have that, or a 1.25-pcf core or a 1.50-pcf core or a 1.75-pcf core, etc.

Finally, in reference to fire safety, *all* foam plastics must be installed in accordance with building codes. A 15-minute fire barrier of, for instance, 1/2-inch gypsum board must cover the foam. Mr. Wilson states that EPS melts at 170°F, which is close, yet ignores the fact that when the melt point of EPS is reached (180 to 205°F) the flame on the front side of the 15-minute fire-rated gypsum is up around 900 to 1,000°F. I dare say that it's quite possible that the curtains and furniture are burning long before the foam plastics are involved.

It should further be pointed out that EPS structural panels have been subjected to ASTM E119 fire testing while under simulated loads of 6,600 pounds/lf. In addition, a 30-psi hose stream was directed on the panel. This is the test requirement, along with UL 263 and NFPA 251. Passing this test results in a one-hour fire-rated assembly. EPS structural stressed-skin panels met or exceeded those tests.

Test results are available by writing on your letterhead to Branch River Foam Plastics, Inc., 15 Thurber Blvd., Smithfield, RI 02917.

George H. Elmes
President
Branch River Foam Plastics
Smithfield, R.I.

Alex Wilson replies:

While most of Mr. Elmes's comments regarding EPS panels are good, it should be noted that not all EPS stressed-skin panels are manufactured with the high level of precision and quality control evident at Branch River Foam Plastics.

The stressed-skin-panel industry is still sorting itself out. The dedication to quality, performance, and testing exhibited by well-established companies is not representative of the entire industry. Use care in choosing stressed-skin panels—whether EPS or Iso. Look for products that have been independently tested for structural and thermal properties and fire safety. Look for code approvals (BOCA and CABO). Look for warranty coverage.

NEB: It Fits In Your Truck

To the Editor:

I would like to express my appreciation for the quality of the articles published in *New England Builder.* They are an excellent resource.

However, I find the size of your publication unwieldy, difficult to handle and read, and particularly unmanageable to store. Why don't you publish in an 8-1/2x11 format?

I also find it difficult to access an article that I've read and am trying to locate in a previous issue. How about an index?

Faye T. Plowman
Extension Specialist
Housing/Equipment
University of New Hampshire
Durham, N.H.

We receive many comments similar to yours, and appreciate the feedback—both good and bad. In defense of the format, the large pages allow us to give you more info for your money. To store them, try the magazine file boxes that hold magazines upright on a bookshelf. Twelve NEBs*—folded over once—fit nicely in one box. (The new, fatter* NEBs *might be a bit crowded.)*

Also, some people like the size. One comment this month read: "The format of your magazine is good for me. I carry it on the truck front seat."

As for an index, look in the January 1987 issue for our two-year "quickie" index. Information on how to obtain a comprehensive five-year index will appear in next month's NEB.*—Editor*

Factory Building vs. Stick Building

To the Editor:

Your "Think Small" editorial in the January 1987 issue raises a few questions.

What is the basis of your statement "...there is still only a minor price advantage to factory building"?

Let's rephrase that and ask "For whom is there still only a minor price advantage?" and for whom is there a decided price advantage?

More and more modulars are being erected here in Merrimack and the surrounding areas. One of the largest builders in New England has just built a panelizing plant in Merrimack. He wants out of costly site stick building as do those builders who are purchasing his services.

In both of these instances, cost and, of course, other reasons play a very important part. However, when you add up the reasons the answer is cost. If you mean to say that for the end user or buyer there is no advantage to this, then perhaps you are right. However, Ryan Homes, at least, is selling houses for about 10 percent less than the same house stick built on site.

Keep up the good work.

Eugene H. Leger
Code Enforcement Officer
Town of Merrimack
Merrimack, N.H.

Editorial

GETTING AHEAD *by* GETTING TOGETHER

The Northeast has a long tradition of quality building, so it's no surprise that the region has become a leader in energy-efficient construction. A focal point for new developments in this area has been the annual conference held by the Quality Building Council of NESEA (Northeast Solar Energy Association). This year's conference, held in Monticello, New York, was no exception. Close to four hundred builders and designers trekked to the Catskills and exchanged ideas about exotic technologies, tight-house problems, and practical innovations in heating, insulating, and building systems.

A welcome addition this year was a greater emphasis on business management. Compared to the sexier topics of Japanese robots or timber framing, the business sessions drew fewer attendees, but the level of participation and depth of discussion were unmatched.

The topics at the business roundtable ranged from the survival-level issues of markup, lawsuits, and getting paid, to the more forward-looking issues of computerization, employee benefits, profit sharing, and job safety.

Because most builders learn the business the hard way, each has reinvented the wheel—but with slightly different spokes. A few of the interesting ideas:

- One builder arranges the financing on all new homes, so that the bank holds the title until he gets his final payment.
- Another insists on an arbitration clause in every contract, with a construction professional as the arbitrator.
- One builder has a tool-buying program that allows workers to charge tools at the local hardware store and have the money deducted from their pay: they love it.
- Another builder photographs and documents all of a house's structural and mechanical systems before closing up the walls; these become part of a manual for the new owners.
- Another has a strict policy about not allowing work during lunch. The reason: he lost a couple of fingers to a table saw just before lunch one day. Midday and the end of the day—when blood sugar is low—are when most accidents occur, he said.

Some little things, some big. But one thing was certain: everyone left the session with more knowledge than they took in. A few told me that meetings like this were the best thing that ever happened to their businesses. Interestingly, these were some of the more successful—and the most willing to share their business experience with others.

So do yourself and your business a favor and start trading ideas—on both business and technical issues—with your peers. No one in government, industry, or education is going to give you the information you need. The only ones who can piece together a map for survival and success in this business are you and your colleagues. ■

—S.B.