

CONTRACTOR

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Commodity thinking can't apply to radiant

BY JOE FIEDRICH
Hydronic heating authority

A hydronic radiant heating system becomes an integral part of the building structure, whether it is installed in the floor, the wall or the ceiling. The water-carrying labyrinth of tubing encased, embedded or cemented into the structure must survive the structure itself. Anything less is not acceptable.

Certain building components cannot fail. Reinforcing wire and rebar in concrete structures, pvc wastewater lines below and inside buildings, underground pe or stainless flex gas lines and sprinkler heads must not fail under any circumstance. There is zero tolerance for mistakes in the design and quality of these system components.

History has taught us that whenever any of these components have failed, it was due to these four factors in the following order:

- 1) Low cost, commodity thinking by the industry itself.
- 2) Manufacturer's over-reaction to competition.
- 3) Misapplication of approval and product listing agencies.
- 4) Incompetence of unqualified industry players.

Factor No. 1: This is the biggest problem in the hydronic heating in-

dustry. Industry players who work on a low budget, and who do not have the resources or the desire to do the necessary research, training and education always initiate this phenomenon. These people usually are ignorant of past mistakes. They tout affordability, while neglecting R&D and quality control during product manufacturing.

The problem is that research and development and quality control are expensive and must be built into the cost of the product. In the case of radiant tubing, these two items do not show. You cannot physically see it. One coil of tubing next to the other looks pretty much the same.

Buying good tubing is a cheap insurance policy for you and your customer.

We continue to have industry players pushing down pex tubing prices strictly for the sake of market share. It becomes very difficult for the quality-driven tubing manufacturers to maintain high standards.

It is up to contractors to maintain those standards by questioning tubing manufacturers about cross-linking methods; R&D; quality control; astm, nsf and din standard confor-

mity; diffusion barrier application procedures; independent diffusion test results; and chemical, long-term temperature-and-pressure and temperature-cycling testing. Once you are convinced that the added cost is justified, it is easier to sell the higher quality to your customer.

On wet (concrete) radiant projects, the cost of the tubing represents 20% of the installed system. If you try to save 30% of your tubing cost by going to a lower quality pipe, the building owner realizes only a 5% reduction in his total project cost. On dry system methods, this cost reduction translates into only 2% to 3%. Buying good tubing is a cheap insurance policy for you and your customer.

Most importantly, you must believe that your tubing supplier has high standards of his own, which go beyond industry requirements. Remember that industry standards are always the lowest common denominator.

The only way to find out is to look at the production facility, listen to the manufacturing details and request test data from independent testing laboratories.

This takes time and trouble but you don't have any choice if you want to get serious about this business and don't want to keep repeating the mistakes of the past. If contractors put the heat on manufacturers to supply tubing that you can install and never worry about, then you'll force the industry to drive the standard and quality levels up.

Factor No. 2: High-quality manufacturers must not fall into the rut of trying to match low-end pricing just to get into new markets or to fight off low-end competition. Product quality will be affected by it long term. The industry's self-imposed quality levels will deteriorate, putting the industry's long-term future at stake. Education allows contractors to justify the price difference.

Major European manufacturers have usually been in this business 20 to 25 years, and have a good track record. It's boring and there are no fancy slogans but the products all work.

The author is president of Stadler Corp. (tel. 781/275-3122), a Bedford, Mass.-based supplier of hydronic heating equipment

Factor No. 3: Standards-setting organizations are important for establishing the rules and regulations for manufacturing system components. Keep in mind, however, that these are the bare minimum requirements to satisfy a variety of manufacturers' needs.

You must also understand that different manufacturers use different manufacturing methods and standards. Some manufacturers who enter the market with a new product idea pretty much write their own standards with the input and consent of the standards-setting organization. Moreover, many crucial system components have failed in the past that were tested and approved by reputable agencies.

Simply rubber stamping a product with an agency's name to give people a false sense of security doesn't benefit anybody.

Unfortunately, a high-profile name of some approval agency will always be available.

Factor No. 4: Don't be blinded by fuzzy and clever marketing tactics and customer relations. Many times, manufacturers resort to this type of behavior because their product isn't all that hot. Take a look at the manufacturer's track record and test data.

All of the pex tubing technology used in our industry originated, in one form or another, in Europe.