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## REMODELING TRENDS

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## HYDRONICS

| LIFELONG LEARNING |

# Education that drives growth

**“Education is the kindling of a flame, not the filling of a vessel.” — Socrates**

*Special to PHC NEWS  
from Taco HVAC*

**I**n the world that pipefitters, technicians, mechanics and journeymen call home, thick calluses and boots worn through to their steel toes are a rite of passage. In this world, the aroma of morning coffee blends with that of No. 2 fuel oil and hot copper. The difference between a full vessel and a blazing, unending pursuit of education can be like that of a system that simply works, and one that shatters expectations and decimates operating costs.

In this industry, it's a full-time job keeping up with the newest

to-riches entrepreneur, Jim Rhone, “Formal education will make you a living; self-education will make you a fortune.”

Moe Hirsch, of Rockland County, N.Y., takes these messages to heart. Even before starting Moe's P&H, Inc., four years ago, Hirsch made it a point to continue his education on his own terms.

Trade organizations and manufacturer-sponsored training have been his knowledge conduit. The level of detail and product-specific knowledge he's acquired on his own allow him to offer what he calls “specialty heating.” It's a focus on hydronic systems that are efficient not only because of high-AFUE

Rabbi Jacob Joseph School (RJJ), of Edison, N.J. The 30,000-square-foot facility had just entered a

**“I think the biggest single factor that helped me earn their trust was handing them an engineered document to show them the math.”**

sweeping renovation in early 2013. Dovi Mueller, the school's director of development, contacted Hirsch after a recommendation from the general contractor. The school's two-pipe steam system leaked, and the huge oil boiler never shut down.



*Moe Hirsch, owner of Moe's P&H, Inc., Rockland County, N.Y., is a member of the Radiant Professionals Alliance and uses its resources extensively when designing a radiant system such as this one that replaces an antiquated two-pipe steam system at the 30,000-square-foot Rabbi Jacob Joseph School of Edison, N.J.*



The oil bill was staggering. “A new heating system and ductwork for AC were the first phase of the renovation,” Hirsch said. “At first, school

administrators were adamant about installing furnaces. Given the damage wrought by the leaking steam returns, their aversion to a new hydronic system was understandable.”

It took some explaining and a level of compromise to turn managers on to the idea of a new hydronic system. Ultimately, Hirsch's promise of efficiency, controllability and comfort combined with longer system life won over. He proposed

technology and the practices and methods that accompany them. Property owners and GCs are looking for more; and to deliver, staying “in the know” isn't optional.

This modulating, recirculating, high efficiency, outdoor-resetting, remote-monitoring world isn't satisfied with trade school completion and a few CEUs each year. To stand out from the competition, it takes more.

In the words of American rags-

equipment, but also because the cumulative solution provided by all components works in unison.

### Small, specialized

“I'm a one-man operation, but there are three journeymen that I hire as subs when I need more hands,” Hirsch said. “Staying small allows me to be consistent, and really apply what I've learned to every job.”

Recently, one such project was at

using hydronic coils in the new ductwork, one for each of the eight zones.

"I think the biggest single factor that helped me earn their trust was handing them an engineered document to show them the math," Hirsch explained. "After designing the system on Taco's free FloPro Designer software, I printed the documents out. It's hard to argue with the numbers when they're in black and white in front of you."

For even larger system designs, Hirsch uses Taco's free HS2 software. But before he saw the value of professionally designing a system on a digital platform himself, he learned it from other great hydronic minds.

#### The right teachers

"About five years ago I met John Barba, contractor training manager for Taco, through his entertaining and informative webinars and blog," Hirsch said. "He really inspired me



Ra Puriri, Taco's go-to expert for their Flow Pro Designer and HSS software programs. "Ra runs design software in his sleep," Hirsch said. And if I have a question, Ra takes calls almost 24/7."

their Flow Pro Designer and HSS software programs. After a few live tutorials, Hirsch began using the software to design and bid each of his jobs.

"Ra runs design software in his sleep," Hirsch said. "You can tell he's really amped about perfecting a design before lighting a torch. It wore off on me. Laying a system out in FloPro Designer—or Taco HSS, the commercial software—is like drawing on a whiteboard. Whether I'm doing block load calculations for

many industry-leading parts as you can throw at a boiler room. But the result leaves a lot to be desired.

"It's a lack of education," Hirsch said. "Everyone's happy to sell the top shelf stuff, but fewer know how it all really operates in concert within the system."

**It took some explaining and a level of compromise to turn managers on to the idea of a new hydronic system. Ultimately, Hirsch's promise of efficiency, controllability and comfort combined with longer system life won over**

The system Hirsch installed at RJJ uses high efficiency components without the confusion.

#### Pack your passion to work

"Moe's a maniac," Mueller said. "He lives and breathes this stuff. After he explained how all the pieces of the system work together for the highest efficiency and comfort, it was obvious why he chose them. As a matter of fact, if we weren't going to let him do it right, he wasn't going to take the job."

Hirsch installed a 530 MBH Viessman condensing boiler. The two-inch copper primary loop uses a single Taco Viridian VR20 pump. At the remote manifolds where copper pipe branches into one-inch Uponor



Moe consults with Davi Mueller, the Rabbi Jacob Joseph School's director of development. "Moe's a maniac," Mueller said. "He lives and breathes this stuff. After he explained how all the pieces of the system work together for the highest efficiency and comfort, it was obvious why he chose them. As a matter of fact, if we weren't going to let him do it right, he wasn't going to take the job."

to dig deeper and go into more detail on system designs. He always says, 'the whole is greater than the sum of the pieces.' Good components are a starting point, but they have to fit together for best performance."

Barba later introduced Hirsch to Ra Puriri, Taco's go-to expert for

a quick swap-out or full room-to-room heat loads, it's effortless, and amazingly intuitive. And if I have a question, Ra takes calls almost 24/7."

According to Hirsch, in the largely-affluent market he serves, it's not uncommon to find systems that are scabbed together with as

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PEX, the eight zones are each isolated with a Taco Zone Sentry zone valve. The PEX supplies the hydro coils, which share the new AC ductwork.

While the Viridian's variable speed ECM motor inherently means less energy expended, the real advantage is the pump's ability to automatically sense and respond to pressure changes without sensors installed throughout the building. The pump modifies its flow and head pressure to perfectly match the building's demand.

"Five inspectors came through the building and were all astonished by the quality of work in the mechanical room," Mueller said. "That spoke volumes."

By the time the 2013-2014 winter hit, the added insulation and updated windows and doors that Mueller had planned for the facility hadn't been installed yet.

"Even without the other upgrades, Moe's work saved us roughly \$30,000 over the first heating season," Mueller said. "It's quieter and more comfortable, too. I

want him to install a boiler for the gymnasium next year."

### Never stop seeking knowledge

"As a hydronic junkie, the hot water coils were a slight compromise for me, but they provided a good solution," Hirsch said. "I like thermal mass as opposed to air movement, but I think that's a product of

spending too much time rubbing elbows with folks at the RPA [Radiant Professionals Alliance]."

Hirsch uses his RPA membership like a library card. He spends time browsing the RPA's vast archives, or as an understudy to the many knowledgeable members. He visits HeatSpring.com for the organization's training resources as often as time permits.

"For the few bucks an RPA membership costs me, I can tap the brains of folks like Robert Bean, Mark Eatherton, John Siegenthaler and Dave Yates. At the ready, there are many years of invaluable, in-the-trenches experience," Hirsch said.

With his educational fire fueled by Taco trainers and the forward-

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thinking pros at the RPA, Moe's reputation and list of professional accomplishments have grown to the point that he's able to select the projects that allow him to make art of his work. But none of it has come without dedication, hard work and continued education. ●



"Five inspectors came through the building and were all astonished by the quality of work in the mechanical room," says Davi Mueller.



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