

—“Seib”, continued

complaints, leaky pipe, and an aging steam boiler lead the owner to seek an alternative. Enter Seib, stage right.

“The plan was to abandon the steam pipe, convert radiators from steam to water, add zoning and control, and fire it all with a condensing boiler,” said Seib. “It was supposed to take place over the summer of 2013 with a reasonable timeline, but that all changed.”

In February, the building’s chimney collapsed, and the owner couldn’t find anyone to fix and re-line it. The start date moved forward a few months, and the timeline was shortened by a few weeks.

■ Under the gun

Luckily for the property owner, Seib had already done the math in preparation for the summer project. Room-by-room load calculations, radiator measurements, product lists compiled, etc. But the timeline was tight.

Electric heaters provided temporary heat while the meter spun like an old 78-rpm record. Seib kept his four-man crew on the project for a full month.

Because Arcadia Hall lies in the downtown district, the boiler vent had to be hidden from view. Installing the 95 percent efficient Burnham Alpine boiler on the third floor with the vent protruding from the roof kept anyone on the street or in adjacent second story buildings from seeing it. With the use of new, two-inch steel mains, Seib played a complicated game

of connect the dots with the radiators.

“As is always the case in these old buildings, hiding pipe was tough, and breaking the systems into zones took some thinking,” said Seib. “We used monoflow piping for some of the radiators depending on which zone they were on and how accessible they were.”

Technicians tapped the existing dual-tube radiators for air vents, and replaced the single-tube radiators with new units. The basement, no longer heated from the steam boiler’s standby heat loss, received a few wall-hung radiators.

■ Savings, Act 2 & 3

While the Alpine is probably twice as efficient as the earlier steam boiler, the level of control the new system provides means additional energy savings. Before the retrofit, the entire building was kept near 80°F to make sure steam was evenly distributed. Tenants simply adapted, or moved out.

With the new boiler and zoning, each tenant can now control their own temperature, so the building is simply cooler than it had been. But the savings don’t stop there.

Because the connected load throughout the building was grossly oversized more than 100 years ago, Seib was able to use a comparatively low supply temperature. This allows the Alpine to coast along at lower load, where the boiler is able to provide just the necessary heat to match the load and keep

occupants comfortable. In addition, as the outdoor temperature varies throughout the winter, the boiler will continue to provide the best load matching to maximize efficiency and energy savings.

■ No problem

But not all failures are catastrophic. Seib has seen quite a number of systems fail simply because of improper installation.

Some of the problems stem from the fact that not all towns in New Jersey have a mechanical inspector, so the plumbing inspector is tasked with passing the hydronic and steam heating systems. Sometimes things get overlooked. “A pretty

common issue we see with steam systems is the lack of- or improper location of headers and T’s, and missing equalizers,” explained Seib.

“Obviously, you pick the product that gives you the least number of issues,” he continued. “We feel that Burnham boilers do that, but no matter whose equipment you’re installing, you’re eventually going to run into some sort of problem. That’s where U.S. Boiler really shines. Their representation, with Tom Dwyer at the heart of it, is unequaled in our area. Unlike some manufacturers, they don’t have a problem when we have a problem.”



(above) Scott Seib, owner of Seib Plumbing & Heating, checks runtime hours on a 285 MBH Burnham Alpine boiler. (below) Oversized connected load, a wide variety of room sizes, and leaky pipes made the Arcadia Hall project a challenging steam-to-water conversion.

