



RETIREMENT CENTER MANAGEMENT STARTS TREND WITH SELECTION OF AQUATHERM PP-R

PROJECT:

Friendship Haven Retirement Center, Domestic Hot and Cold Water

PRODUCTS:

aquatherm green pipe®

LOCATION/DATE:

Fort Dodge, IA,
Summer 2011- Spring 2013

AQUATHERM ADVANTAGES:

- On a fast-track project, Aquatherm provided labor time savings thanks to heat fusion and its lighter weight compared to steel
- Aquatherm Blue Pipe® was not insulated on several applications, whereas steel would have been
- Ownership embraced the corrosion- and scale-resistance and exceptional flow rates PP-R offers

Retirement care center staff helps set in motion a change in the way domestic water and other systems are piped in the Fort Dodge area.

A domino effect has taken place in Iowa and it all started in 2011 when Mel Smith with Friendship Haven in Fort Dodge, sought and specified an alternative piping solution for the domestic water supply systems on a three-building project.

As VP of Campus Support Services for the 60-acre Continuum Care Retirement Center (CCRC), Smith was responsible for the new buildings being added to a campus that includes 52 townhomes, 56 independent living units, 104 assisted living units, and a 96-bed health center. The solution to his problem was a highly engineered polypropylene-random (PP-R) piping system that's relatively new to North America: Aquatherm.

Smith found the piping system via the value engineering process brought to them by their mechanical contractor, Midstate Plumbing & Heating Inc. "We built another project with copper and have pinhole leaks," Smith explained. So he and his design team (including Dan Dahlman, the project's mechanical engineer with Minnetonka, MN-based Emanuelson-Podas, Inc.) were intrigued enough by Aquatherm to conduct a job-site tour of a PP-R installation at the student center at a college in Minnesota.

Smith was impressed with the natural insulation quality and rigid construction of Aquatherm pipe, and after seeing the installation, was onboard with using it for the project. "We liked the insulation

factor. I'm kind of picky and I like things organized. It's [Aquatherm is] very organized and I don't like how PEX runs like a garden hose."

While other materials had initially been considered, once Smith saw Aquatherm in action, "We didn't price out anything but Aquatherm," he said.

A DURABLE PIPE THAT SURVIVES HARD, CORROSIVE WATER

The Friendship Haven staff selected Aquatherm Green Pipe®, a potable and food-grade pipe system known for longevity, quality, and the ability to endure hard water. Troy McIntyre, with the local Aquatherm manufacturer's representative, Sys-Kool, and staff from the local Aquatherm distributor provided the design team with education and support.

"Friendship Haven was looking for an alternative and when Midstate's Mike Omann saw Aquatherm, he knew it would be a good solution. The Fort Dodge area has water quality issues, which erodes copper pipe," McIntyre recalled.

Sys-Kool and the local Aquatherm distributor provided half-day heat fusion welding training for the entire Midstate staff at their office. When installed by Aquatherm-trained installers, Aquatherm piping systems come with a 10-year multimillion dollar warranty that covers not only material replacement but also property damage, personal injury, and loss of use of the facility. Heat fusion is essential



to the success of PP-R piping systems. Proper socket fusion involves cutting the pipe, marking it for insertion depth, heating the pipe and fitting for a specified time (typically only seconds) on the heating iron, then pushing them together to cool. Once cool, the pipe and fitting become a single piece with no potential for leaks.

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While the fusion welding process can save significant time versus welded connections, maximizing productivity and a balance between tooling and installers does involve a learning curve. "When we started our first project with Aquatherm, things were not going so well and I almost sent it all back and went with copper," Omann said. His team initially struggled to get the heat fusion irons into tight spaces.

Aquatherm now offers Contractor Profitability and Aquatherm Installer training courses that provide specific, hands-on means and methods of addressing some of the issues that the Midstate team was able to figure out on their own. "I had some plumbers that all they did their entire career was install copper, and they were going to have nothing to do with installing plastic water pipe. But we worked through the issues and found that prefabbing as much as possible made installation much easier and we trained some of our apprentices and first-year journeyman and they seem to have no problems working with the Aquatherm," Omann added.

THE TIMES, THEY ARE A-CHANGIN

Omann told his team "times and material are changing, and if we want to move forward, we need to change with them and that is what



we need to do." Beginning in October 2011 Midstate began installing more than 23,000 ft of Aquatherm Green Pipe ranging in size from ½-in. to 4-in. for domestic water supply in three buildings.

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—Mike Omann, Midstate Plumbing & Heating Inc., Fort Dodge, IA

The water mains were brought into the buildings and connected to the Aquatherm Green Pipe supply mains that were installed in homeruns down the main halls. In the Simpson Health Center the main line was 4-in., while the River Ridge Assisted Living mains were 3-in., and the Schmoker Adult Day mains were 1 ½-in.

All the domestic water supply connections throughout the three buildings were made via socket fusion, fusion outlets, and butterfly valves. Aquatherm offers over 400 fittings and valves, and its fusion outlets offer considerable time and material savings. The fusion outlets shine in main/branch applications since they allow branch lines to be installed when the pipe

is already in place. The pipe is simply drilled into with a specially designed bit that removes the PP-R material and the fusion outlet is welded into the drilled hole. The hole can be made in the side wall of the pipe anywhere on the pipe that is accessible.

The Aquatherm Green Pipe ½-in. branch lines were then connected to the fixtures with brass stubouts. (Aquatherm now offers a line of copper stubouts.)

In all, roughly 150 lavatories were installed, with Aquatherm connecting to PROFLOW lavatories with Delta faucets, Mansfield Plumbing Products toilets, and Best Bath Systems showers. The clinical sinks are Kohler brand with Zurn flush valves and kitchen and break room sinks are Elkay brand with Delta faucets.

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Although Aquatherm pipe is naturally insulated, local regulations required all the pipes in unconditioned spaces be insulated due to the dramatic temperature and humidity changes in the region. While the subcontractor used a standard fiberglass insulation that was sized for steel pipe (National Stonewool has since introduced an insulation solution specifically for Aquatherm), Omann said the process was smooth and “no different than it would have been with copper.”

FEWER LEAKS – AND LABOR SAVINGS TOO

The three-story, 62,725-sq-ft River Ridge Assisted Living (and parking garage) opened in September 2012. Also three-story, the 116,650-sq-ft Simpson Health Center opened in June 2013, and the single-story, 4,475-sq-ft Schmoker Adult Day opened in October 2013.

When asked if he was satisfied with Aquatherm pipe, Midstate’s Omann replied, “Yes, it carries a good insurance policy for one thing and our water here is really corrosive. And it’s a labor savings too. The product material-wise is about the same we pay as copper. And it actually goes in nice.”

“We’ve had very minimal leaks,” said Smith. “Out of the three [Aquatherm] projects, we only had a few leaks. If we had used copper, it would have been a lot more – that’s great!” In addition to his responsibilities with Friendship Haven, Smith is the head for the facility managers group of the non-profit organization, LeadingAge National, and told his colleagues about his satisfaction with Aquatherm pipe.




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MORE SATISFIED CUSTOMERS

“It is a lightweight, unique product,” Omann added. “I have used it on several different jobs. Friendship Haven was the first one.” Aquatherm has now been installed in a variety of buildings in the city of Fort Dodge. Midstate bought three Ritmo irons, which they continue to use on Aquatherm fusion installations for other projects.

Aquatherm has been installed in two car dealerships for domestic water, hydronic, and compressed air piping. Aquatherm has also been used for domestic and chilled water piping at a local pharmaceutical plant and on a cooling tower chemical piping line at a carbon monoxide recovery plant, as well as other installations. 



The German-manufactured pipe has been one of the world’s most durable and greenest piping systems for four decades and proven successful in 70-plus countries. Aquatherm piping systems offer many performance and environmental benefits, such as:

- Eliminating toxic materials, glues and resins, and open flames from the piping installation equation
- An R-value of 1 or more per inch or greater depending on pipe size and SDR
- The fusion welding process, which creates seamless connections that last a lifetime without leaking or failing
- An optional faser-composite layer in the pipe reduces linear expansion of the pipe by up to 75% compared to plastic piping



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