



aquatherm

Provide lasting pipe performance

NONTRADITIONAL PIPING OPTION TAPPED FOR DOMESTIC WATER AT OLYMPIC VILLAGE HOUSING PROJECT

PROJECT INFORMATION

PROJECT	PRODUCTS USED	LOCATION / DATE
Olympic Village Housing, Potable Water Distribution	Greenpipe®	Vancouver, British Columbia October 2009

AQUATHERM ADVANTAGES

- A multimillion dollar warranty provided the owner with peace of mind
- PP-R eased copper theft concerns
- No solder, flux, acetylene, or torches necessary on the jobsite



THE CHALLENGE

Extremely corrosive water in the area typically ruins copper pipe within 15 years

THE SOLUTION

Over 8,000 linear feet of corrosion-resistant Aquatherm was installed in two parcels of the project

While the bulk of the Millennium Water South East False Creek Olympic Village housing project parcels used the traditional option, copper piping, for domestic water, a couple of them took a different route. Parcels 3 and 6 were piped with Aquatherm Greenpipe®, which is made from polypropylene-random (PP-R), and is designed specifically for potable water applications. Each parcel included 150 high-end residential units ranging between 750-2,500 square feet.

Jeda Mechanical, which served as the mechanical contractor on those parcels, suggested the PP-R product early in the design stage. Jeda's owner/manager, Jim Myers, explained that he had been introduced to Aquatherm by the local EMCO office and was immediately interested in it.

"It has so many good characteristics. It will last the lifetime of a building. It is much lighter than other metals, and isn't going to get stolen like copper. Its flow rates are far better, and it has a natural insulation value," he said.

When Myers, who has been in the industry for 25 years, presented PP-R to Cobalt Engineering (the job's designer) and the owner, all of these factors and one additional one sold them on it. "The area's water is extremely corrosive to copper, thus the notion that the material used in German-manufactured Aquatherm is so corrosion resistant that it's often used in acid waste applications closed the deal."

"When I talked with the owner and told him that it would



last the life of the building he was sold. Around here, the corrosiveness of the water tends to eat up copper piping within 15 years," Myers said. Part of the reason he could safely say the PP-R will last as long as the buildings is that it has been proven for over 35 years in 70-plus countries.

Additionally, Aquatherm backs their product with a 10-year warranty on pipes and fittings, with a product liability valued at 9 million Euros for personal injury and 4.5 million Euros for property damage per event.

While Jeda automatically offers a two-year warranty, the added manufacturer's warranty (which is dependent upon completion of factory certified training) certainly helped. Jeda had a total of 16 employees complete the Aquatherm training, which lasted a half day.

“IT REDUCED LABOR AND MATERIAL COSTS, SAVED TENS OF THOUSANDS OF DOLLARS, AND YOU DON’T NEED TO INSULATE AQUATHERM WITH FIBERGLASS, BECAUSE OF THE PIPE’S INSULATION PROPERTIES ITSELF.”

- JIM MYERS, OWNER/MANAGER OF JEDA MECHANICAL

Heat fusion welding is a process essential to the Aquatherm system. Joints are formed via a quick and simple fusion process in which the pipe and desired fitting are simply inserted onto an Aquatherm welding device and heated for a specified time (typically only seconds), then joined together.

Once fused, pipes and fittings have the same physical properties, eliminating systematic weaknesses. Additionally, a faser-composite fiberglass layer in the pipe reduces linear expansion of the pipe by 75% compared to other plastics, and ensures that it hangs rigidly.

Jeda purchased the necessary Aquatherm fusion welding equipment, and Myers said the investment was worth it. “We bought it with the intent of using it again. The price of it was tough up front, but now we have the equipment, and the system as a whole provided a lot of labor and material savings. We didn’t have to have any solder, flux, acetylene, or torches that we would have had, so you have to consider that, too.”

The lighter weight and ease of installation offered by the PP-R was also valuable. “We were able to downsize the pipe since Aquatherm’s flow rate is so much better than copper or ductile iron, and it’s also lighter and easier to use,” Myers said. Plus, copper is stolen faster than you can put it on the job, so it saved us money there too.”

All domestic water mains were run with Aquatherm, with a total of roughly 8,500 linear feet of Aquatherm installed in pipe sizes 2-inch through 6-inch, along with hundreds of fittings.

Myers explained that in all those fusion connections, there

were virtually no leaks. “It reduced labor and material costs, saved tens of thousands of dollars, and you don’t need to insulate Aquatherm with fiberglass, because of the pipe’s insulation properties itself,” he said.




While PP-R has a natural R-value of 1, Aquatherm Advanced, a foil wrap, was added to meet flame spread code requirements.

While the product’s natural R-value of 1 was beneficial, in order to meet the UL 25|50 flame spread rating, Jeda wrapped the pipe with Aquatherm Advanced, a foil wrap that Myers said was 50% less expensive than traditional fiberglass insulation.

While this was the first PP-R installation of pipe this size in British Columbia, the pipe met all of the necessary codes and also all expectations. Myers said they were able to use 4-inch Aquatherm instead of 6-inch ductile iron, thanks to the former’s superior flow rate. He estimated that project wide, they downsized by 40-50% compared to iron.

“I was open to it from day one. Any time you can use a piping system that’s going to last a lifetime and provide the customer with a far superior product, you want to do it. That system will not need to be re-piped for 75-100 years,” Myers said. “Those are the only parcels like that, and the others will need to be re-done in 15 years or so.”

The project, which took about two years, concluded in October 2009 and the units are now occupied. While the residents might not know it, they are also benefiting in terms of tap water quality since the domestic piping system is completely non-leaching, has no impact on taste or smell, and is micro-organism-free. 

The German-manufactured pipe has been one of the world’s most durable and greenest piping systems for nearly 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 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

CONTACT:



919 W. 500 N. • Lindon, UT 84042 • 801-805-6657

www.Aquathermpipe.com