



COLLEGE LEARNS WATER LOSS LESSON

*New Pipelines Replace
 Steel Lines Leaking 50 Gallons a Minute;
 Project Takes Top Honors in Industry Awards
 Program*

COLLEGE STATION, Texas - Like many communities, municipalities and utilities across the country, Texas A&M used carbon steel pipe and fittings for its water supply systems. These lines, however, decayed in the ground, causing extreme leak rates of up to 50 gallons a minute in some areas. Starting in 2008, the University started to use high-density polyethylene (HDPE) pipe in order to provide a leak-free system for its cold water lines. In 2017, while building the University's new RELLIS Campus in Bryan, Texas, the use of polyethylene pipe was expanded to include of a new grade of pipe made from Polyethylene of Raised Temperature Resistance - PE-RT - for its heating hot water lines.

The RELLIS Academic Complex, expected to be completed in June 2019, includes a \$42 million, 68,000-square-foot building that houses classrooms, group learning and collaboration spaces, modern allied health teaching laboratories, upper division science laboratories and more than 40 faculty offices. The entire 112,460 square-foot RELLIS Academic Complex will accommodate 2,500 upper-division students.

The RELLIS project was named Project of the Year for the Energy Piping Systems Division (EPSD) of the Plastics Pipe Institute, Inc. (PPI) and won the award for the piping systems provider, ISCO Industries, Inc. (Louisville, KY) and the pipe manufacturer,

Performance Pipe (Plano, TX), a division of Chevron Phillips Chemical Company, LP. Both are member companies of PPI, the major North American trade association representing all segments of the plastic pipe industry. The Projects of the Year is an annual event for PPI.



"We're seeing more and more expansion of the use of polyethylene pipe," stated Tony Radoszewski, CAE, president of PPI. "And there are new grades of the resin being created to meet demand for high-temperature applications, for example. At Texas A&M, they faced a severe water loss problem, which they have been correcting during the past ten years and didn't want to be faced with the same situation for its new state-of-the-art campus. Using HDPE and PE-RT pipe is providing the solution. With the success of this project, Texas A&M has also become a leader in the water utility industry. Other universities have inquired about its system and to find out how they can make the change on their own campus. There's no denying the amount of water saved, and that fact alone is convincing

others to make the switch to HDPE and PE-RT pipe. This project has become a template for other projects needing a leak-free solution that will last them for decades to come. It is very deserving of our industry's highest honor of being named Project of the Year."



Accepting the PPI Project of the Year Award are Heath Casteel, Performance Pipe (left) and Mike Whitehouse, ISCO Industries (third from left). Randy Knapp, Ph.D., director of engineering, PPI Energy Piping Systems Division (second from left) and Tony Radoszewski, CAE, PPI president (right) made the presentation at the association's annual membership meeting.

Nearly 10 years ago, the school decided to start replacing problem areas with polyethylene pipe. "We started on the domestic water system," said Reuben Bernal, the supervisor for water distribution at the school, "and the switch was so successful that now essentially all steel pipe on campus has been replaced, and all new construction projects utilize polyethylene pipe.



"For years, we always did it with carbon steel pipe and mechanical joints. But, just like anything else, it decayed in the ground."

The team faced high leak rates and dealt with too frequent interruptions to service on campus. "On a normal day, we were losing up to 40-50 gallons a minute," Bernal said.

While designing the University's new RELLIS Education and Research Campus, a high-tech, multi-institutional research, testing, and development campus, engineers once again specified polyethylene. ISCO Industries provided 10,000 feet of 24-inch diameter DR 17, PE 4710 high-density polyethylene (HDPE) pipe for chilled water lines and nearly 10,000 feet of 12-inch diameter DR11 PlatinumStripe® 1800 PE-RT Pipe manufactured by Performance Pipe for the heating hot water lines.

For the heating hot water system the 12-inch diameter PE-RT was installed with Gilsulate® insulation as backfill in one section, while in another area, re-insulated PE-RT was used. ACS Mechanical LLC (Bryan, TX) did the installation, which took four months.



According to Randy Knapp, Ph.D., engineering director of the Energy Piping Systems Division of PPI, "With the addition of PE-RT, it's now feasible for any building or complex to switch their systems to polyethylene pipe. PE-RT significantly expands the operation window for polyethylene pipe with pressure ratings up to 180°F. It also allows intermittent operating temperatures up to 203°F. PE-RT pipe can also be used in many types of harsh environments including mining, pulp and paper mills, oil and gas gathering plus nuclear facilities. It has the same inherent benefits as HDPE pipe including fusible, leak-free joints, it's non-tubercular and will not corrode or decay."

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The RELLIS Master Plan calls for the campus to be a '...new paradigm for the future of basic and applied research, technology, development and education.' Without reliable water service this would not be possible. As Bernal, who is responsible for the water system at the school said, "If we're out here having to cut service off to make repairs and there's no water for a few days, an hour or 15 minutes, that's a big thing." The school's move to a total polyethylene pipe system is one way to prevent that from happening."



For additional information, go to the Plastics Pipe Institute's website at: www.plasticpipe.org.

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About PPI:

The Plastics Pipe Institute, Inc. (PPI) is the major North American trade association representing all segments of the plastic pipe industry and is dedicated to promoting plastic as the materials of choice for pipe and conduit applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in the development and design of plastic pipe and conduit systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.