

Upsizing With Trenchless Technology

Roloff Construction Completes
Nebraska's First InneReam® Project

By Curt Grandia, *Midwest Contractor Magazine*

Roloff Construction recently became the first contractor to use the InneReam Trenchless Pipe Replacement System in Nebraska. The Omaha underground contractor used the system to replace 1500 feet of 8-inch clay tile pipe with 12-inch High Density Polyethylene pipe.

According to John G. Nowak, who patented the system in 1995 and is president of InneReam and vice president of Nowak Pipe Reaming Inc. in Goddard, Kan., the process is fairly simple. "The process uses a directional drill to push the drill stem through the existing pipe," Nowak said. "Then we use a specialized reamer to grind and remove the existing pipe as the replacement pipe is pulled back into place."



Roloff's project for the City of Omaha, on Ed Bebe Gomez Street near the stockyards, involved two bores. In each case, they set their Ditch Witch JT4020 All Terrain about 130 feet back from the first manhole and drilled under the street to get into the manhole. Once in the manhole, they pushed the stem through the existing pipe to the destination manhole. They then attached an InneReam Rehab Reamer and the HDPE pipe, and back-reamed through the existing pipe while pulling the replacement pipe into place.

"In addition to the fact that the replacement pipe can be up to twice as large as the pipe being replaced, the thing that is unique about this process is that all the old pipe is removed," said Jarrett Dace, of Ditch Witch of Omaha. "With pipe bursting, the old pipe stays in and just gets pushed out into the ground around the new pipe. This way, all that debris gets pushed along in front of the reamer to an extraction point. It doesn't disturb the flow line and of course there's no damage to the other structures like the roadway or utilities.

"The process requires busting up the manholes to get the pipe in but it keeps the road open and that's very important on a busy street like this with all the cattle trucks and factory traffic."

Using the InneReam process requires only a slight modification to the boring gel, said Andy Schumacher, a field sales and service representative for Baroid Drilling Fluids. "It's a little different because instead of following the pipe, the fluid is coming forward ahead of the reamer," he said. "With our bore gel, we use a surfactant to keep the reamer clean, and we use some no-sag to give us some extra suspension and carry capacity to carry the larger pieces they're breaking up and make sure it flows to the exit pit where they'll take it out."

The HDPE pipe used on Roloff's project was supplied and fused by CES Industrial Piping Supply, LLC of Omaha.

"HDPE pipe is becoming more popular because of its resistance to chemicals," said Dave Ziola, territory sales manager for CES. "On this particular project, we supplied 40-foot sections and we're also doing the fusing. We face each end, heat the ends to 450-500 degrees, bring them together at a predetermined pressure and hold them to cool.

"When the pieces are fused, they become one piece of pipe with no joints because the joints are actually stronger than the pipe itself."

Well-known as a larger diameter underground specialist, Roloff Construction's addition of directional drilling equipment and use of the InneReam System has expanded its capabilities.

"The new technology is the way of the future and we felt like if we're going to be in the pipe business we needed to have this option," said company President Larry Roloff. "It's new to us but we're learning."

On the Bebe Gomez project, Roloff's crew had the replacement pipe installed in less than two days.