

NEWS



Hydratight's cool solution to problem pipeline

Household plumbers often freeze a pipe before a repair so the job can be completed more quickly and without the fuss of draining the supply.

Now Hydratight Injectaseal, based at Kerpen, has scaled-up the technique – by freezing a water main supplying hundreds of homes!

The company used its liquid nitrogen process on the main pipe at Erlenbach, 40km south east of Frankfurt, in a job for the local water management company, AMME. The result was a far faster repair than usual, with far fewer customers inconvenienced.

The new technique involved placing a cuff around the 12in main pipe, through which 3,000m³ of water normally flows each day to hundreds of homes and offices.

Liquid nitrogen was circulated through the cuff for three hours, taking the temperature to -55 degrees C and forming a plug of ice in the pipe, sealing it sufficiently to withstand 8.5 bar water pressure. This meant other pipes in this area could still be used. Previously the supply would have had to be blocked at a convenient stop valve, cutting off water to far more homes.

AMME staff had already prepared the new slide to fit over the pipe to complete the repair, which took only another hour. The pipe was then allowed to thaw and water flowed again.

“The main was 50 years old and needed repair,” said Sven Markmann, AMME’s drinking water technical manager for the area. “This was the first time AMME had used the pipe-freezing method in the region. Using the older method, over 1,000 residents would have been without water for several hours. With the new method, only around 50 people were affected. We are very pleased with the result and we will use it again in future”

The freezing method has several advantages, explained Hydratight Injectaseal project engineer, Joerg Theis.

“Freezing means far fewer people are affected and we don’t have to wait a long time for the system to drain down before work can start,” he explained. “Normally you would need to wait for apartment blocks and towers to run dry – and when they refill, there is the problem of flushing out debris in the lines. This way, repriming isn’t needed and the system requires no flushing, so completion is much faster and cheaper.”

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