



Fernkälteversorgungsleitung Privatklinik Rudolfinerhaus

Data and facts

Company

Type Pipeline construction

Runtime 07.2019 - 04.2020

Principal Wiener Netze GmbH

[Project report online](#)

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A first for Vienna, completed in challenging conditions.

Construction section 2: Wertheimstein park.

Before starting work in Wertheimsteinpark, a large access road, covering an area of 1,400m², had to be built; this would be used to transport filler material, deliver the pipes, and take away the spoil. To create the road, the top layer of topsoil – around 30cm of humus – was removed and stored nearby; a layer of felt was then installed and covered with recycled material to bring the route up to the required height. All the trees along the route had to be protected with temporary fencing. Any roots found as the pipeline trenches were being dug were exposed manually and protected, under the supervision of the Vienna Parks & Gardens department.

Once the 432m long pipe trenches were complete, the uninsulated plastic pipe and the factory-insulated plastic sleeve was installed and the joints were welded. Once again, a water pressure test was carried out to ensure that the pipes were watertight before they were covered with sand.

Next, the trenches beneath the paved areas were backfilled with self-compacting material and temporarily sealed with hot-mix asphalt. Beneath the green areas, the trenches were backfilled with graded replacement filler and the top 30cm were filled with sieved humus. Finally, the teams completed the construction stage by dismantling the temporary access road and replacing the saved humus. Around 2,260m of DN 100 prefabricated cable conduits and 21 prefabricated cable ducts were installed in the Hofzeile and Wertheimstein park construction sections.

Construction section 3: Krottenbach sewer.

Work in the Wertheimsteinpark section was still underway when work began in the Krottenbach sewer – a 3.2m x 2.5m brick sewer. Before Kraft&Wärme and Integral could start work laying the pipes in the sewer, WIBEBA dismantled the construction pit and extended the brick arch to 6.5m x 2.5m. A dedicated stairwell was built to provide safe access to the Krottenbach Sewer. In the sewer itself, sleeved DN 200 PE steel pipes were laid on brackets coated in coal tar epoxy along a 2m x 294m section.

All work in the sewer had to be coordinated in daily discussions with Vienna's sewage company, Wien Kanal. A safety officer had to be present above ground at all times to ensure prompt action could be taken if any flooding occurred in the sewer. When it rained heavily, work had to stop, since the sewer would flood. All workers were required to wear a multi-gas monitor and a self-contained self-rescue device.

Once the steel pipe had been laid and welded, not only was the water pressure test carried out, but in addition 10% of the weld seams were subjected to x-ray inspection to verify that there were no welding defects. As soon as the pipe had been declared properly watertight, it was connected to the existing system.

Finishing work.

The final step involved backfilling the pipelines along their entire length and preparing them for operation. A high-grade steel mesh housing was installed around the steel pipelines to protect them against damage. The stairwell was then removed, the sewer vault sealed with prefabricated concrete parts, and the construction pit backfilled.

Impressions

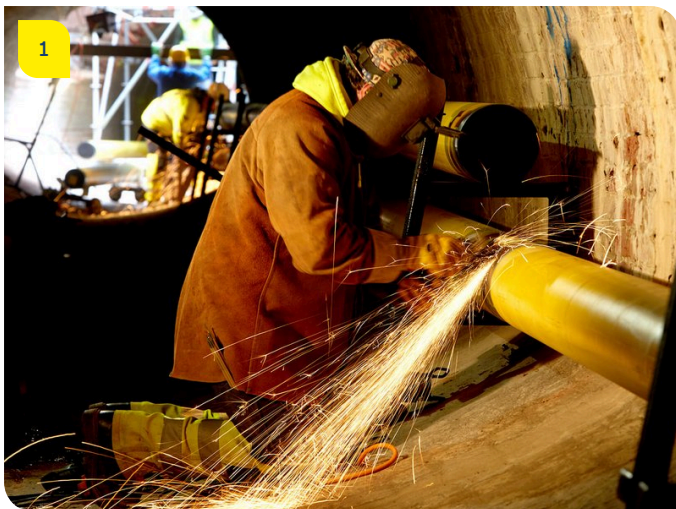


Image notes

1

Welding in the Krottenbach sewer.

Pipelines for a new district cooling system were laid, in a short construction period and extremely cramped spatial conditions.

3

Safe and sound.

The steel pipeline encased with a high-grade steel mesh in the Krottenbach sewer.

2

Freshly laid.

The new district cooling pipelines, looking into Wertheimstein park.

4

Final steps.

Putting the prefabricated concrete parts into place to seal the brick arch of the Krottenbach Sewer marked the end of a complex project.

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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