



Drinking water pipes in Erfurt, Germany

Case study: Schmidstedter Knoten

The "Schmidstedter Knoten" is an important traffic crossing in Erfurt, Germany.

Several arterial traffic roads meet here and, in addition, the eastern railway connects to Erfurt Central station via a big bridge which also crosses the city ring road at this point.

Under the crossing, there are important supply lines for the city of Erfurt

Task

The pipelines are an important part of Erfurt's drinking water supply, and by 1973 they had, for various reasons, to be laid under the "Schmidtstedter Straße" traffic junction.

44 years later, the severely corroded DN 500 drinking water pipeline had to be replaced.

As the supply channels are very tight and also contain gas pipelines and electrical cables, pipe welding was not an option - for security reasons.

Solution

Alvenius FlowMax® pipes are spirally welded and grooved for on-site connecting with Victaulic couplings. This system allowed for an installation time of only five days, instead of the planned fourteen days.

Due to the Alvenius FlowMax® pipes extremely low inner friction, the large inner diameter plus the adaptation to the current water consumption, the dimensioning of the pipes could be reduced to DN323 – for a required end pressure of 16 bar.

Alvenius FlowMax® pipes, couplings and fittings are coated with CorroFlo® - a surface coating with maximum anti-corrosion property, corresponding to C5.

Compared to other pipe materials, Alvenius FlowMax® pipes are considerably lighter as they are produced and spirally welded with high-quality DOMEX 420 steel.

Due to thin pipe walls and low weight, FlowMax® pipes are far easier to handle and install compared to conventional pipes.

Customer benefits

Alvenius FlowMax® installation was quick and easy, completely without welding - all that was needed was a socket wrench.

The FlowMax® system means easy dismantling if needed, a certain angular joint deflection, axial joint play as well as larger tolerances.

FlowMax® pipes are ca 40 % lighter compared to conventional pipes, which was why the Stadtwerke Erfurt and the planning office decided to choose the Alvenius system.

Facts

- 400 metres of drinking water pipelines, DN 323
- Pressure level 16 bar
- Fittings and couplings
- CorroFlo® coating
- Installation period - 5 days
- German Trade Partner: HTI Thüringen



No welding possible due to gas and power lines in the tunnel



A total of 400 m pipe line was installed in record breaking time



Member of Boxholm Group

