

Pipe Jacketing Sewage Lines

with Bentofix® in a category II medical water preservation zone



The City of Bad Elster, Germany resolved to put in new sewage lines. Since this construction project was within a category II medical water preservation zone (pursuant to RiStWag 2002), secondary protection for piping was necessary to protect medical water in the area.

This meant either employing double-walled pipe with all its cost-intensive overhead or jacketing a single-walled pipe with a sand/bentonite mixture at least 25 cm thick - a procedure requiring a lot of work effort. Working together with local engineering offices, NAUE came up with a long-lasting, economical alternative. Pipe jacketing made of Bentofix® BFG 5000 geosynthetic clay liners (GCL) was proposed.

This system employs bentonite matting whose encapsulated bentonite powder absorbs liquids in the event of a pipe leak, causing it to swell and thereby seal the leak. These characteristics make bentonite matting act as a secondary protection system.

Since the nonwoven upper surface of Bentofix® is filled at the factory with sodium bentonite, all overlapping areas are self-sealing on contact with water. This eliminates cost and time expenditures at the construction site to seal overlaps.

Other advantages of this bentonite matting technique are:

- rapid placement
- minimal wage and material costs
- high-quality protection system

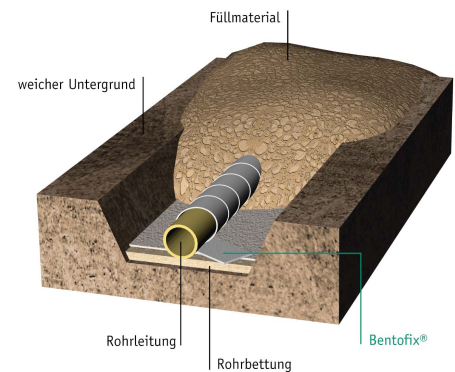
These advantages convinced planners to the point that even future new lines and refurbishing work is also to be carried out with this system.

Year of construction: 2002

City / Country: Bad Elster, Germany

Installed products:

Bentofix® BFG 5000 sqm



Schematic cross-section



Attaching Bentofix® to the sewage line



Bedding in sand



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