

## Temporary pipeline between the Canitz waterworks and the pipe bridge

When the regional dam management authority decided to install sheet pile walls in the flood prevention dyke running between the river Mulde and the Canitz waterworks to protect the region against future flooding, the public water board in Leipzig saw its opportunity to renovate the two parallel DN 1000 grey cast-iron long-distance pipes that supply the city of Leipzig with fresh water from the Canitz and Thallwitz waterworks. The work involved inserting DN 800 ductile cast-iron pipes and fitting longitudinal positive locking BLS® socket joints to the installation.

Both the Canitz plant (commissioned in 1912) and its counterpart in Thallwitz (commissioned in 1943) feed water into both pipes in the 23-kilometre stretch of dual transport pipeline that runs towards Leipzig. The section of pipeline to be renovated was located between the Thallwitz/Canitz junction, close to the Canitz waterworks and a pipe bridge running over the river Mulde. The pipelines pass under the flood prevention dyke.

During the first stage of the project, a temporary DN 800 pipe with BLS® socket joints was constructed and commissioned between the Thallwitz/Canitz junction and the pipe bridge.

After commissioning the temporary pipeline, one of the two DN 1000 pipes due for renovation was taken out of operation so that a DN 800 pipe could be inserted. The inserted pipe was then commissioned and the temporary pipeline removed. The pipes and fittings used to construct the temporary pipeline were then re-used to renovate the second DN 1000 pipe.

When this pipe was reassembled, the used TYTON® DN 800 sealing rings were replaced with new sealing rings of the same type. The temporary pipeline was 208 m long. The pipe inserted into the Thallwitz pipeline was 178 m long, compared to a total pipe length of 199 m; in the Canitz pipeline, the new pipe was 185 m long, compared to a total length of 203 m.



*The course of the temporary DN 800 pipeline across the dyke between the pipe bridge running over the river Mulde and the Canitz waterworks*



*Straight course of the temporary line along the construction site road to the Canitz waterworks*

All of the pressurised drinking water pipes were fitted with longitudinal positive locking BLS® DN 800 socket joints, with a wall-thickness class of K 9, a cement mortar lining in accordance with EN 545 and a 400g/m<sup>2</sup> zinc/aluminium coating, as well as a blue epoxy resin cover coating in accordance with EN 545 and DIN 30 674. We also fitted various ductile cast-iron fittings in nominal size DN 800.

The newly installed pipelines were connected with longitudinal positive locking fittings and valves at the Thallwitz/Canitz junction and on the west side of the pipe bridge.