



PIGGING IN THE OLYMPIC VILLAGE OF 1936

The Olympic Village of 1936 in Berlin is a real estate project and is located in Elstal in Brandenburg, hardly more than 10 km west of Berlin. It can certainly be considered one of the premium national urban development projects in Germany.

Funded by the Federal Ministry for Environmental Protection, Nature Conservation, Construction and Reactor Safety, new apartments are being built on the site of the former Olympic Village of the 11th Olympiad. In addition to new buildings, the historical character of some buildings, which have been severely affected by the passage of time and through use by the Russian armed forces during the almost 50-year division of Germany, is to be preserved.

The reuse of the site also includes the recommissioning of the historic waterworks, which was built in 1935 and closed down at the beginning of the 1990s. According to the plan, the waterworks which is a listed building should be fully operational again by 2020. This will require the drilling of new wells, as the existing ones have been shut down. In future, groundwater will be extracted from a depth of 80 to 90 m and fed into the plant as raw water for treatment.

One of the tasks was to plan the raw water pipelines from the wells to the waterworks. Pig access points were planned to ensure that these pressure lines could be cleaned. The engineering office PST GmbH in Werder (Havel), which was commissioned with the planning for the Olympic Village project, is specialised in the field of project development, construction planning and construction supervision. The responsible planning engineer, Mr Fiedler, became aware of the advantages and possibilities of a Reinert-Ritz solution for cleaning pipelines at an early stage and was able to convince the responsible water association to plan the new product for the project. Thus, instead of resorting to expensive and costly sewer shaft constructions, the decision was made in favour of the currently most economical solution: the Quick-Pig pigging station.

No sewer shaft is necessary, no hazardous descending of slippery steps, no problems with possible fermentation gases or water in the sewer shaft. In the future, pigging will be done directly from the ground surface. The Quick-Pig station is a complete unit made of PE 100 and V4A stainless steel that is installed in the pipeline. The basis is a section of a solid bar of PE 100. A rod with $d = 1,000$ mm is used in the pigging station dimensions foreseen for this project. The pressure-tight bayonet lock finds its counterpart in the basic bod. The dome with the dome cover and pipe connections are welded on here. As only V4A stainless steel is used in addition to PE 100, the pigging station is particularly corrosion-resistant and durable. The dome extends the station from the pipeline directly to below the upper surface of the road. There it is sufficient to remove the

dome cover, which is located under a sewer shaft cover to protect the unit, to gain access to an insert anchored in the piping system by means of a bayonet lock.

This not only allows you to directly inspect the condition of the pipeline, but also to insert a pig. In addition to the resulting safety aspects of the fully pressure class-compliant fitting, is also a strong economic argument for its use in maintaining pipelines. The pig can be removed at another Quick-Pig station with the help of a special „basket“ that is used for pigging. A total of three Quick-Pig stations were planned and installed for the first construction section in the Olympic Village. The stations are designed for the pipeline diameter of DN/OD 280 and SDR17 and with individual dome heights of 1,300 mm, 1,400 mm and 1,700 mm. All pressure-tight bayonet locks have also been equipped with a quick coupling in order to be able to work with external water when flushing the line. In total, the raw water pipeline in the first construction section between the waterworks and pigging station III is a full 582 m long. In between are Station I at a distance of 118 m from the waterworks, and Station II at a distance of 99 m from Station I. The largest distance pigged in one piece is the section between Stations II and III, measuring 365 m.

The stations were able to be completely installed in one day. In addition, the time required for pigging will be significantly reduced in the future, minimising the total life cycle cost of the system in the long term. The quick station from Reinert-Ritz is a solution that demonstrates that something complicated can also be designed simply.




QUICK-PIG
STATION