

URBAN INFRASTRUCTURE PROTECTION OF A POLISH REGION'S WATER SOURCE

Dzieńkowice Public Reservoir – Imielin, Poland



Imielin water reservoir

Client

Imielin City Council

The challenge

To design and implement an efficient and reliable vacuum sewerage system that serves a town of 9,000 residents and ensures the protection of a reservoir providing drinking water to several million Polish residents.

Background

The Polish city of Imielin is located in southern Poland beside the Dzieńkowice Reservoir, a beautiful man-made lake used by locals and tourists for a broad range of recreational activities, including sailing competitions, fishing, swimming and sunbathing on sandy beaches.

Dzieńkowice Reservoir also supplies drinking water to Imielin and communities across the Silesia region. It is therefore vital that Imielin is served by an effective and reliable sewerage system offering the highest level of environmental protection.

The city also sits in a region that has been subject to extensive coal mining over many years, causing damage to the terrain, including subsidence.

Between 2006-2019, Imielin implemented a comprehensive vacuum sewage system as part of a multi-phase construction process. A total of 60 km of vacuum lines were built and more than 1,000 vacuum valves installed. Flovac Polska was an integral partner in the project, supply vacuum valves, vacuum station equipment and a propriety cable monitoring system.



Imielin vacuum station

Why Flovac's solution was chosen

Imielin is characterised by flat and mining-damaged terrain, as well as difficult ground-water conditions. Given these challenges, the city recognised that Flovac's vacuum sewerage system offered a cost-effective solution, in part because it requires shallow trenches, which cuts construction costs and enables faster deployment.

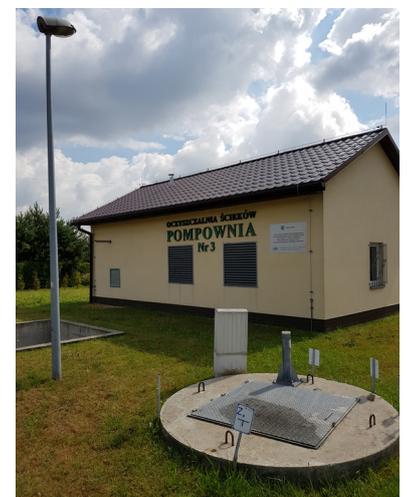
Environmental protection was also a key factor because vacuum systems operate with negative pressure, ensuring no sewage can leak out (even in the event of a rupture). In addition, this means there are no overflows and rainfall cannot infiltrate.

Finally, Flovac's solution offered reliability and stability, as well as easy monitoring and maintenance. The monitoring of the vacuum system via a cable system (FMS) offers the client stable power and is a great alarm system for activations, pressure and potential failures.

Flovac Polska has been a leading developer in this type of monitoring and can save the client money through ease of operations and reduces risks to the community via fast alerts to the operators.



The project involved more than 1,000 vacuum concrete 'pots'



Vacuum pumping station



Imielin vacuum pumping station control cabinet and cable monitoring control panel

The results

Flovac's technology has delivered outstanding reliability to the city and unrivalled protection to the Dzieckowice Reservoir. As a result, Imielin City Council remained fully committed to an investment and implementation process that continued over a 15-year period until completion in 2019.

Smaller scale expansion of the vacuum sewerage system will continue as the Imielin continues to expand.



The final word

"Operating any sewage system involves challenges, but the task is easier when you are working with a reliable partner like Flovac Polska sp. z o.o. We know we can always count on the company's help in terms of design, implementation and operation".

Marek Jędrzyk, President/CEO Miejska Spółka Komunalna

Flovac's vacuum sewerage system is not only suited to environmentally sensitive regions or challenging terrains. It offers tangible benefits to all manner of new and existing residential developments.

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