

# Grundfos helps provide first-rate wastewater treatment in Poland

ZABRZE, POLAND: Zabrze was originally founded in the 13th century and is located in the south of Poland. Much of the city's wealth comes from mining, but other industries have gained prominence in recent years. The wastewater plant in Zabrze is one of the few in Poland capable of treating sewage in accordance with the strictest of European requirements. Not only that: it is also one of few plants in Europe to employ biological removal of biogenic compounds, known as the "Bardenpho" process. The demand for excellence and reliability throughout made Grundfos a natural choice for pump solutions as the modern treatment facilities were constructed.

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**TOPIC:**Wastewater treatment

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**LOCATION:**Zabrze, Poland

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**COMPANY:**Sewage Treatment Plant  
Zabrze-Centre

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## THE SITUATION

In recent years, the community of Zabrze has gradually moved away from mining to focus on chemical and electrical industries as well as engineering and building. The main task now facing the local authorities and inhabitants is to alleviate the damage done to the environment in the past and to improve present living conditions.

To support this process, a mechanical-biological sewage treatment plant was completed in 1998. These modern facilities handle domestic and industrial waste, have been dimensioned to meet future as well as present needs, and meet Polish and European standards for wastewater quality.

## THE GRUNDFOS SOLUTION

The wish for environmentally friendly wastewater treatment called for high-quality equipment. Grundfos pumps were chosen for their reliability and robustness, giving the customer perfect confidence that the pumps installed would ensure smooth operation.

At the first processing stage, the raw sewage is screened and transferred for biological treatment. Equipped with six 65 kW dry-installed Grundfos wastewater pumps, the station operates at variable speed to transport incoming sewage according to demand.

External and internal recirculation is used in the biological blocks, reaching up to 200% compared to the average inflow. Four 20 kW impeller pumps from Grundfos constantly deal with large-scale flow volumes in order to remove nitrogen from the sewage. And six 26 kW submersible Grundfos pumps work 24 hours a day to keep the plant operational - reliably and cost-effectively.

Furthermore, the customer also selected Grundfos pumps for the other tasks that need to be carried out within a wastewater plant, such as circulation and cooling. All units are connected to a central computer system for immediate adjustment to current demands.

#### THE OUTCOME

The Zabrze Centre plant and the modernisation of older facilities have made Zabrze one of the few cities in Poland to meet all environmental standards for wastewater treatment. The plant has contributed greatly to winning Zabrze the prestigious Environmentally Friendly Community Award. This has been supported by the approximately 80 Grundfos pumps located at the plant, all of which have provided reliable service throughout.

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## Related Products



### S PUMP - SUPER VORTEX SINGLE- OR MULTI CHANNEL IMPELLER

Pumping of raw water, unscreened raw sewage, water containing sludge, industrial effluent