

CASE STUDY

Modernization of Historical Water Treatment Plant in Warsaw Brings Increased Efficiency and Savings

The Warsaw Water Filters in Poland, also known as Lindley's Filters, were built in 1883 - 1886 by William Lindley, an English engineer who together with his sons designed water and sewerage systems for over 30 cities across Europe. Lindley's Filters are listed as one of Poland's national historic monuments. Today they are the oldest water filter station in Warsaw, delivering 50% of the clean water for Warsaw. The station has been modernized repeatedly.



Lindley Water Filters (Filtry) in Warsaw, Poland

“ *We replaced the complicated sewage pump installation with modern Sulzer technology. These kind of demanding projects challenge us to develop our knowledge.* **”**

Piotr Matysiak - Project Manager Sulzer Wastewater Poland

The Sulzer difference

- The energy efficiency of the new installation is more than 20 % better than before the upgrade.
- Thanks to the energy-efficient IE3 motor, the pumps save energy and keep the carbon footprint at the lowest possible level.
- Sulzer's submersible sewage pumps type ABS XFP are constructed for wastewater, but can be used in many different applications.

The challenge

To improve the water quality, the customer decided to modernize the rapid filter and control system. The biggest challenge was that because the pumping station is a historic building, the construction could not be changed.

The solution

To replace the existing flushing pumps, Sulzer delivered three submersible sewage pumps type ABS XFP 501U-SK3 PE1600/6 in vertical mounting with variable speed drives (VSD). The pumps were installed during the second half of 2014.

Customer benefit

The treatment plant was upgraded with very modern pumps with remarkably smaller power consumption than the previously installed pumps. Thanks to the Sulzer technology, the customer's energy savings are close to 50% in comparison to the previous installation. The pump motors have a large power reserve and a very good efficiency.

Product data

Sulzer submersible sewage pumps type ABS XFP 501U-SK3 PE1600/6

XFP 501U-SK3 PE1600/6 (160kW)	Flow m ³ /h	Head m	Shaft power kW	Hydraulic efficiency %	Total efficiency %
Two pumps working together	2,600	14.8	132.2	81.3	77.87
One working pumps	3,050	10.3	111.9	79.42	76.05



Sulzer submersible sewage pumps, 480 kW power and 9500 kg of pure efficiency

Contact

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Applicable markets

Wastewater treatment

Applicable products

Submersible sewage pumps type ABS XFP