

CASE STUDY

Sulzer Makes Aeration History

In 1992 – three years after Poland became a republic – a high technology aeration system with 215 mm membrane disc diffusers made by the Finnish company Nopon was installed into two aeration basins of the new Pulawy wastewater treatment plant in Poland. At that time this was one of the most efficient aeration systems in the country.

In 2001 – when Poland was preparing to join the European Union – the plant needed a modernization for nitrogen removal. Two new nitrification basins were built and equipped with a high-efficient Nopon aeration system with 300 mm disc diffusers. The system installed in 1992 was kept in operation.

In 2014 – when Poland had been a member of the EU for 10 years – the plant was modernized and adapted to new energy savings requirements.



Fine-bubble disc diffuser system

“ I installed the Nopon system in 1992, the new aeration system in 2001, and finally also the new aerators and the Sulzer turbocompressor in 2014. This counts for 25 years of reliable product quality. ”

Antoni Musialik, Manager of the installation company

The challenge

The challenge for Sulzer was to prove that the new products are even better than the reliable and proven components previously used.

The solution

Sulzer replaced the old aeration systems of the treatment plant by a proven, long-life, and very efficient aeration system. The old systems were recycled.

Customer benefit

- Complete aeration package from single supplier
- More efficient aeration at lower cost
- The high-efficiency and maintenance-free turbocompressors replaced the old and energy-intensive positive displacement blowers
- Added value through Sulzer’s experience and knowledge

The Sulzer difference

- High-quality, reliable, proven and long-life aeration solution.
- In the high-speed turbocompressor market, Sulzer is the leader in magnetic bearing technology.
- Lower energy consumption, reduced operating costs, lower maintenance costs, and less downtime.

Product data

Wastewater treatment plant with a capacity of approx. 25 000 m³/d based on carbon component treatment in 1992, nitrogen removal in 2001, and today a high-efficient treatment plant with nitrogen and phosphor removal capability.

- Disc diffuser system based on KKI215 fine-bubble installed in 1992
- Disc diffuser system with PIK300 fine-bubble installed in 2001 and 2014
- HST™ 20 turbocompressor delivered in 2014



Sulzer's HST™ 20 turbocompressor



Pulawy wastewater treatment plant in Poland

Contact

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Applicable markets

Municipal and industrial wastewater treatment

Applicable products

Noxon aeration system
HST turbocompressors