



Air in Homeopathic Doses for Microorganisms in sewage treatment plant



An application report by Bachofen AG, Swiss sales partner of Schubert & Salzer Control Systems GmbH.

The management of the Flos sewage treatment plant in Wetzikon places a high value on innovation coupled with efficiency. It is therefore not surprising, that they prefer suppliers who can put forward innovative solutions when making their purchases.

Many successful companies in the private sector have flown the flag of innovation. Also the public sector welcomes innovation, as has been proved by the operators of the Flos sewage treatment plant in Wetzikon in the Zurich Oberland. They invest some 350,000 Swiss francs every year into projects with the Mure in mind and, thanks to an efficient operations management, have been able to lower their charges at the same time.

Prepared for future challenges

Specific projects for the next few years include the extension of the thermal power station to make use of the biogas generated during the anaerobic digestion of the sewage sludge, as well as new solutions for the transportation of the sewage sludge. In the pipeline also are plans for a fifth stage of the treatment process for the separation of micropollutants. Sooner or later, the operators of sewage treatment plants will be faced with tight limits for nanoparticles. The Fies plant will be ready when it happens. "This is an explosive topic" explained Operations Manager Markus Sobaszkiwicz, "because the effects of nanotechnology on the environment are still largely unknown."

Thumbs up to an innovative sliding gate valve technology from Schubert & Salzer Control Systems

Markus Sobaszkiwicz is convinced that the challenges of the future will only be overcome by using innovative technologies. It just needs the courage to go down new paths today. He and his team stick to this philosophy consistently when it comes to renovating existing parts of the plant, such as the modification of the aeration tank. Conventional pneumatic gate valves were previously used in this area for the control of the oxygen supply. These could not provide the required degree of control accuracy. Therefore, re-



"Before, Bachofen was just a stop-gap for us. Now we've found out that the company is also able to present solutions to tricky problems - in line with the motto 'nothing's impossible'." Markus Sobaszkiwicz, head of town waste treatment (Operations Manager Flos Sewage Treatment Plant), Wetzikon

placing these units with just another conventional product was no option. As Markus Sobaszkiwicz explains: "We took our problem to Bachofen (sales agency for Schubert & Salzer Control Systems in Switzerland), who surprised us, out of nowhere so to speak, with an unconventional proposal to solve the issue of controlling the O₂ supply. The specialists in the Fluid Control and Pneumatics Department recommended that we install pioneering sliding gate valves which should significantly reduce energy consumption."

Minimal tolerance - maximum savings in energy consumption

The operations manager took a keen interest in the idea. After a joint visit to one of Bachofen's customers who was already using this technology, he made the firm decision to take a chance on an unconventional solution. The result proved him right: "By using those unique sliding gate valves, it's now possible to control the air requirement for optimal microorganism action with a maximum deviation of one percent, a precision we've never achieved before." The effect of the new solution on energy consumption

is substantial. The operator of the Flos plant was able to say with satisfaction that, compared with measurements taken the previous year, energy consumption had dropped by five to ten percent. And there is still scope for making more savings, according to Markus Sobaszkiwicz.



Control room at the Ros Sewage Treatment Plant, Wetzikon



Sliding gate valve to control the oxygen content in the biological process



The slotted plates sliding against each other form the main throttling element in sliding gate valves. Since it is possible to avoid metallic seats in this design, no score marks are made which, in traditional valves, result very quickly in expensive leakages.

Flos town drainage sewage plant - Sewage treatment for the town of Wetzikon and five other communities, as well as the maintenance and operation of all of the town's sewers and special plants, and the Bäretil and Aathal/Seegraben pumping stations.

Plant start-up

1961, extended to present state in 2001

Location

Wetzikon

Operations Manager

Markus Sobaszkiwicz

Number of employees

6 plus 1 trainee

Motto

“The most innovative sewage plant in Zurich Oberland”

Bachofen customer

Since 2005

Website

www.araflos.ch

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