

Blowers Serving the Environment

Staßfurt sewage plant - modern water treatment.

Since the reunification of Germany the new federal states have made great efforts in bringing their water treatment facilities in line with national environmental standards. An example of a modern sewage plant is that belonging to the 'Südliche Börde' (Southern Plains) Water Association, in Staßfurt.



Blown air aerates the sewage

In 1992 thirteen communities in Magdeburg formed the association with the prime aim of bringing their facilities up to modern environmentally acceptable standards. This goal was achieved in May 1998 with the opening of the Staßfurt central sewage plant.



Compressed air as a processing medium

At the Staßfurt plant, sewage is treated in three stages, in all of which compressed air plays a vital role. In the first stage coarse material is mechanically removed with the aid of band rakes and any sand or gravel particles it may contain are separated out to be pumped to a sand washing plant. Air blown through the water brings fats to the surface to be skimmed off into a chamber for further treatment.

Air blown through the slurry brings fats to the surface in the preliminary treatment stage.

Biological/chemical cleaning

The second and third purification stages are biological, carried out by microorganisms in activated sludge basins. In the inner settling basin, phosphates are eliminated and in the outer ring basin nutrients are broken down by nitrification and subsequently de-nitrified with the aid of air blown gradually through perforated rubber hoses known as 'candles'. The oxygen content of the sludge is closely controlled to match demand by regulation of the blown air volume. The sludge is separated in subsequent clarification basins, partly returning to the process and partly going on for further treatment by dewatering. Clean water on the surface overflows the basin and is drained away

Plant supervisor Stefan Stahn is well pleased with "his" blower station.



Essential reliability

"Reliability is our utmost concern," states plant supervisor Stefan Stahn, "We can't tolerate any failure in our systems. This applies to the electrical power supply, which is backed up by an emergency generator, through quality control to the blower station." Here, six energy-saving KAESER rotary blowers are installed with a combined capacity of 6680 m³/h. The blower project was planned and installed by KAESER engineers in cooperation with the Magdeburg's Civil Engineering Office. Stefan recognizes the value of their joint effort, "I'm well satisfied with the blower station." he confirms, "It's reliable, easy to maintain and we get full support from the KAESER service team."