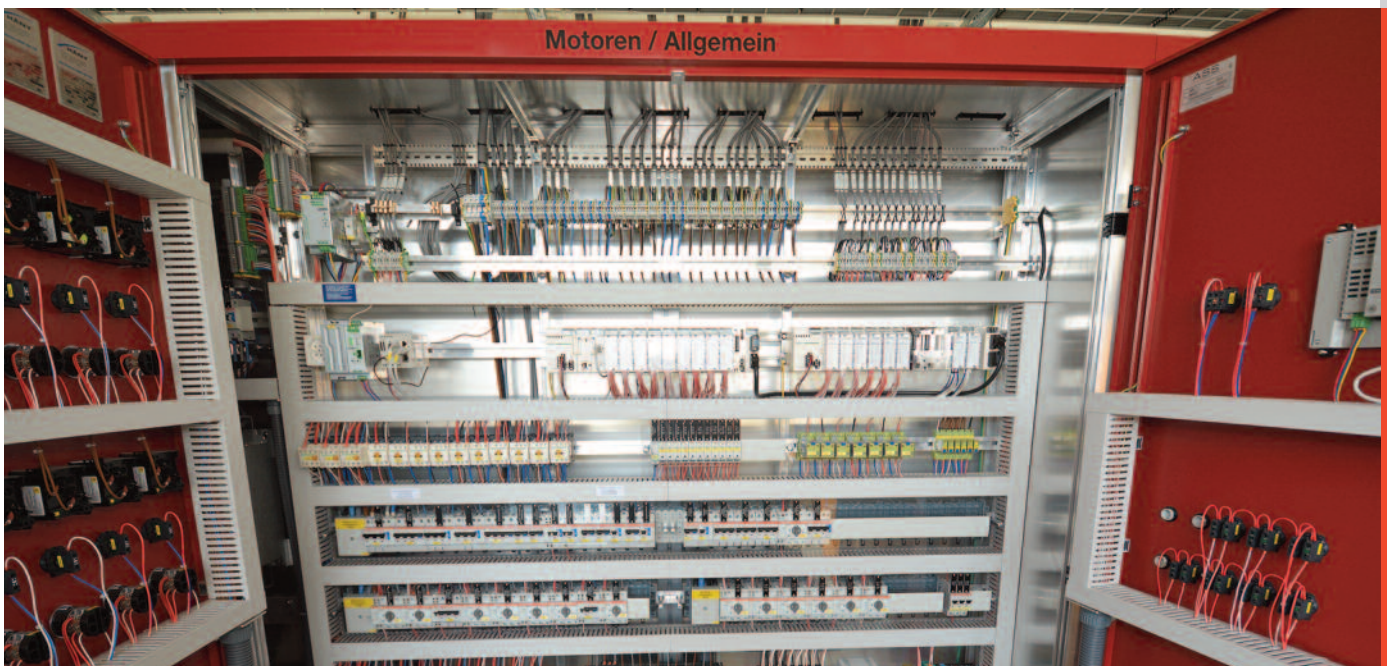




STEBATEC[®]
Measure - Control - Regulate

Full renewal of a stormwater basin for the City of Grenchen

- New control equipment with process visualization
- Simple basin cleaning by floating matter agitation
- Safe and rule-compliant exhaust system



View into one of the new control cabinets.

Starting situation

The City of Grenchen is currently renewing its four stormwater basins constructed in different years. The first such basin to be refurbished is the second-oldest and the biggest of the four basins built in 1975 and named after the public swimming pool nearby. The basin had a number of structural defects but most pressing were the rectification of issues of operating the basin and

problems of work safety. The electrical equipment and the instrumentation of the basin needed an upgrade badly. Besides, the explosion protection of all equipment items in the wet had to be brought in line with current regulations. In addition, reasons of water protection required that the volumes delivered to the waste water treatment plant had to be increased during rainy spells. STEBATEC was privileged to provide the following work for the City of Grenchen.

Requirement

- Modern control, measuring and electronic equipment
- Suva-compliant working conditions
- Improved water protection by larger flows during rain
- Optimized early overflow

Implementation

The outdated control equipment was brought up to date. All processes were visualized and can now be monitored online via browser with the ARAbella process control system. Besides, all pumps, the measuring and electronic equipment were replaced. The critical phase, i.e., the change of the electrical components (control software, control cabinet) was completed in two days during which no provisional operation of the system was necessary. For construction work that required a longer time to complete a rain alarm system was installed because the level in

the flow-dividing structure can rise suddenly when it is raining. To make the operational procedures less complicated and reduce the input, air nozzles now clean the stormwater basin. They keep the solid substances in the basin floating and prevent sedimentation. The new exhaust system is an important factor for improved working conditions. Together with the new lighting installation, it provides a safe environment inside the ATEX zone. Besides, the energy consumption of the air-conditioning system of the equipment room was optimized. Finally, a new gate adjusts the outflow to the sewage treatment plant as required by the level in the stormwater basin.



Detail view of the new main distribution board.



A new exhaust system (gray tubes on the wall and the ceiling) makes working in the ATEX zone safe.

Captions

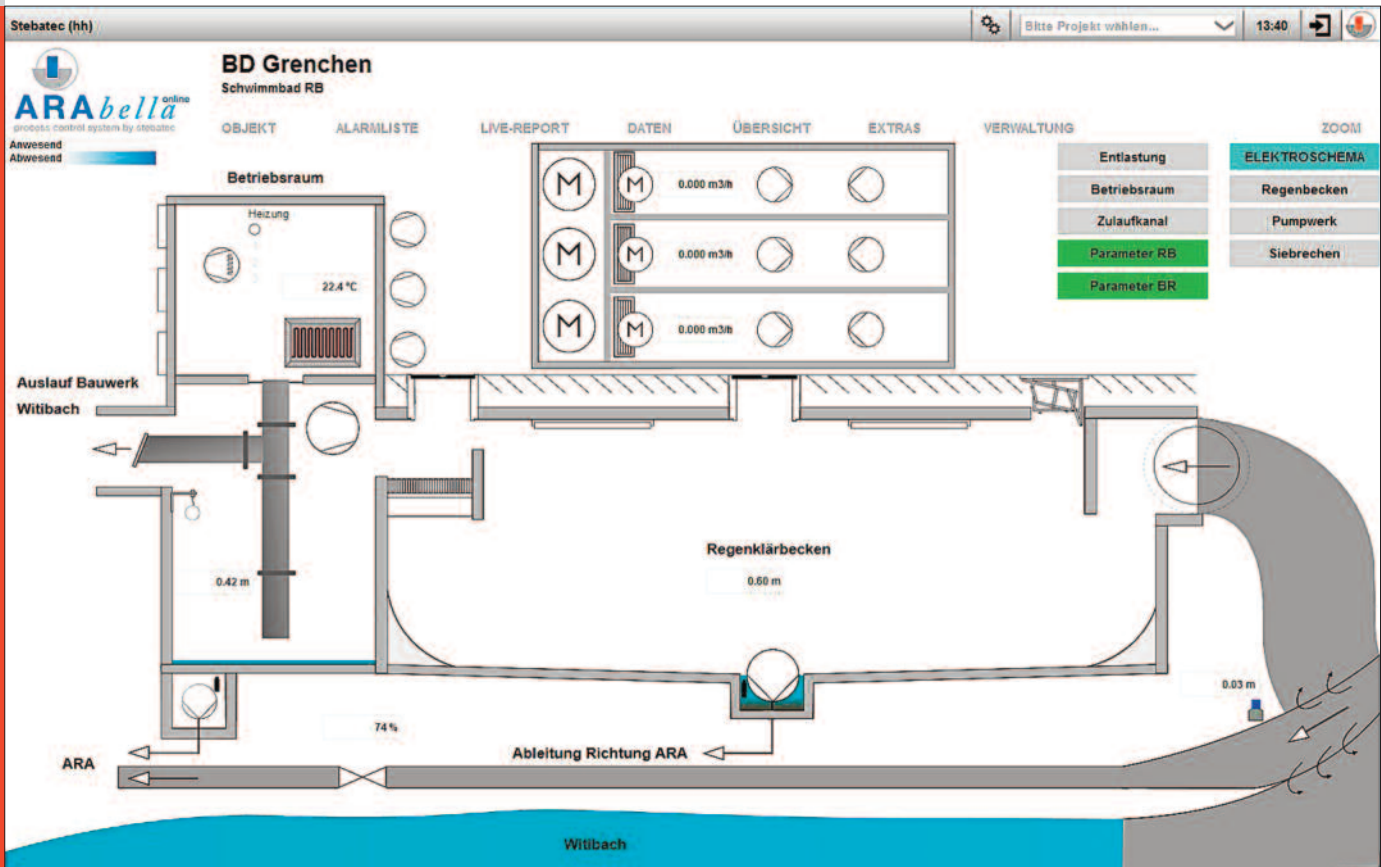


The old ...

... and the new, equally sizable main distribution board after the replacement.



Outside view of the building which accommodates the new switchboard and the exhaust equipment, plus the pumps for the stormwater overflow.



All processes are now visualized and can be controlled online by the web-based ARAbella process control system.