

success story

Ryburg-Schwörstadt, Power Station Switzerland

Retaining weir installation maintenance

There are eleven run-of-river hydroelectric power stations, together generating around 4,100 GWh of electricity per annum, on the Upper Rhine between Lake Constance and Basle. Ryburg-Schwörstadt Power Station, commissioned in 1931, is the largest of these run-of-river hydroelectric power stations. It generates approximately 760 million kWh of environment-friendly energy every year. Ryburg-Schwörstadt Power Station has a retaining weir installation with 4 spillways each having a clear diameter of 24 m.

The function of the retaining weir is to discharge excess water that cannot be handled by the four turbines. The system is controlled fully automated.

The gearwheels for the winches are subject to major stresses and strains. This means that the spent grease on the tooth faces is shed after only a short period of operation and the gearwheels run dry.

Economic reasons led to the search for a solution to reduce ongoing maintenance and work-intensive manual relubrication. This is why **simalube** lubricators, as already used in other places, were chosen as the solution at the power station.

Custom-made retaining fixtures are installed in the area of the tooth faces. The 100 mm-wide brushes with the 125 ml **simalube** lubricators are mounted on these retaining fixtures. The felt strip has been removed to allow the general-purpose MoS₂ grease to flow through the brush. Since some of the gearwheels are relatively wide (up to 300 mm), two laterally offset brushes are used in certain cases.

The **simalube** lubricators will now soon have been in operation for two years. They operate impeccably, to the full satisfaction of the acting power station operator. Virtually no maintenance is now required, apart from exchanging the lubricators.

The **simalube** lubricators are set to operate for six months.

