Simply.
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CASE STUDY

DEVICE-INTEGRATED FIRE PROTECTION IN WATER TREATMENT

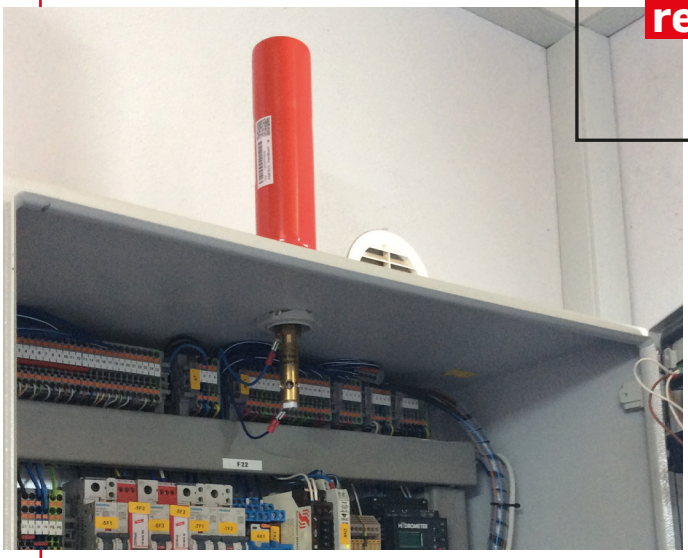
Safe water supply for the residents of a town in the Rhine region of Germany!

Its Celtic and Roman past, Rhine-ish joie de vivre, romantic orchards, and the proximity to the Rhine river with excellent transport connections, characterize the community of Weißenthurm. Due to the central location in the Middle Rhine Valley, it is perfectly positioned to explore the diverse surroundings in a star shape. Taking in Koblenz, the 2000-year-old town on the Rhine & Moselle, the fortified town of Neuwied, or the town of Andernach, with the world's highest cold-water geyser, Maria Laach, with its lake and monastery, Eltz Castle, Bürresheim Castle, and the Nürburgring, which are all within easy reach.

The town council is responsible for providing residents with essential services. The Weißenthurm municipal water works have been responsible for the water supply and wastewater disposal for many years. In order to permanently secure the drinking water supply, the water supply for the district includes 7 elevated tanks, with a storage volume of 8,800 m^3, and 36.4 km of transport lines, as well as a distribution network of approx. 152 km (excluding the mains-to-house connection lines). Furthermore, water in the Eifel region is supplied to the Maifeld-Eifel water supply association (WVZ).

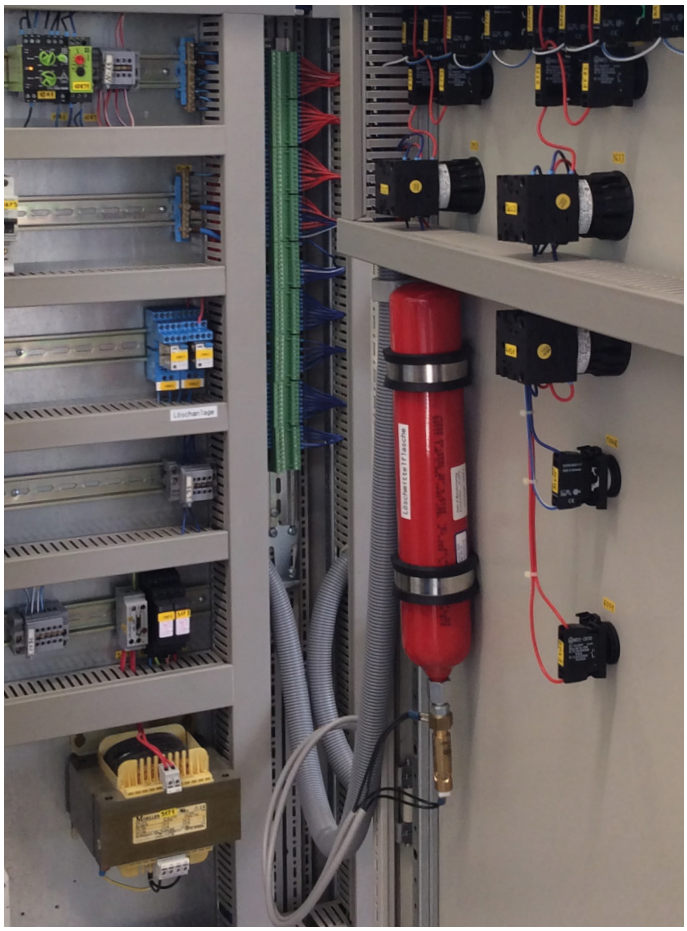
The weight of responsibility for keeping all of the pump stations, electrical systems and controls fail-safe and operationally safe falls to the technical management team. Preventive measures play a key role in fire protection.

> The focus was on **fast and residue-free fighting** of any fires in the electrical systems.



In order to ensure the operational safety of their electrical systems, the electrical engineering and preventive fire protection teams sought advice from Multicomsystem OHG in Hilden. The focus was on fast, and residue-free, fighting of any fires in their electrical systems. Their system includes control cabinets, control devices and pump systems. The aim being to keep any fire damage to a minimum, so that repair times are short, and system failure, and restrictions of the drinking water supply, are prevented.

The decision was made in favor of the AMFE Automatic Miniature Fire Extinguisher unit. An extinguishing unit (cylinder with thermo-bulb) integrated in the switch cabinet, which reacts when a predetermined temperature is exceeded, or by remote triggering (e.g., smoke detector), which automatically triggers an extinguishing process, using the sprinkler principle. In Weißenthurm, a decision was taken to have both. This means that (1) if the temperature is exceeded AND (2) if smoke is generated, the extinguishing process is triggered. Via a Programmable Logic Controller (PLC) and the Process Control System (PCS), when the extinguishing device is triggered, (1) an optical and acoustic signal is activated, (2) the control cabinet fan and power supply are switched off, and (3) the status and measures are forwarded to a permanently manned office.



If you have any questions about possible applications, or technical details, please contact **rajko.eichhorn@job-group.com**

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