WATER DISTRIBUTION:
ROTTAL WATER SUPPLY ASSOCIATION (ZWR)

Beating water loss and saving energy

SEE HOW DEMAND DRIVEN DISTRIBUTION RESULTED IN 30% ENERGY SAVINGS, LESS PIPE BURSTS AND LESS SUPPLY FAILURES, AS WELL AS A SIGNIFICANT REDUCTION IN WATER LOSS

The company supplying drinking water to customers around Rottal in Lower Bavaria, Germany, faced a big challenge. The Rottal Water Supply Association (Zweckverband Wasserversorgung Rottal – ZWR) serves some 6,000 properties along 275 square km of green, rolling hills but its pumping stations were 25 years old. And these "old-fashioned," inefficient pumps and motors weren't the only challenges. "The landscape here is a bit hilly – the pressure is always poor in the highest places," says Roland Kainz, ZWR's head engineer. "The problem was that we had large pressure surges and quite a few complete failures. It was either due to air in the pipes or overload.

The water simply didn't come. So we decided we needed a new pump system."

New system

After a consultation to see how ZWR could optimise its system, Grundfos suggested Demand Driven Distribution (DDD) – including booster sets, controller, sensors and more. ZWR installed a Grundfos Hydro MPC-E 5 CRIE 10-9 booster system at the main station in Wolkertsham and a Hydro MPC-E 4 CRIE 10-6 system at the downstream Opping pumping station. A Grundfos CU 354 controller is the heart of the DDD operation.

UP TO 30%
ENERGY SAVINGS

REDUCED WATER LOSS

EASY OPERATION

GRUNDFOS

OUTCOME
- Demand driven distribution uses sensor data to ensure optimum network pressure and stable supply
- More reliable, maintenance-free and energy-efficient system
- Less water hammer, less stress on piping and less water loss

"We operate reliably with the appropriate pressure and a stable supply. The system is more maintenance-free, more dependable and energy-efficient."

Roland Kainz,
Head Engineer, ZWR

Preventing pressure problems

Using pressure transducers known as XiLog units at two critical points in Rottal's network, pressure values are measured and sent to a DDD controller via GSM network. "The results were immediate" says Kainz. "The system works well. The CU is perfect. It just works. The CU gets information from the XiLog sensors. So at night when demand goes down, it lowers the pressure, and if the need arises, it's increased. This means less strain on the network, reducing water loss. And it also saves energy." Based on current figures, Kainz estimates ZWR is saving around 30% energy with DDD. "I'm proud of the good solution we've found with Grundfos," he says. "Grundfos has seen to it that we operate reliably, with the appropriate pressure and a stable supply."

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