

## Easy monitoring of waste water pumping stations by Grundfos

Grundfos Remote Management (GRM) offers simple and cost effective monitoring of waste water pumping stations.



Kuldīga is a town in Western Latvia. It is the centre of Kuldīga municipality with a population of approximately 13,500. Kuldīga was first mentioned in 1242. It joined the Hanseatic League in 1368.

### The problem

Kuldīgas Ūdens SIA is a company, which is responsible for local waste water treatment. Waste water treatment is a sophisticated procedure and sometimes requires a complex system. The recent system at Kuldīgas Ūdens SIA must ensure a steady flow from the main pumping station to the sewage treatment plant in order not to destroy any bacteria. Full and reliable monitoring is a critical point.

In 2010 local authorities decided to upgrade the existing main waste water pumping station with a remote monitoring system. Furthermore newly built waste water stations should also be equipped with such a solution.

The customer Kuldīgas Ūdens SIA looked for a simple and cost effective monitoring system. The technical director, Mr. Agris Alkšņuzars, already collected some experiences with the previously set up system, but he was not satisfied with the service provided by the company, which installed this system.

Grundfos took this opportunity and presented GRM (Grund-

fos Remote Management), which fully convinced Mr. Agris Alkšņuzars and his team by its simplicity and cost effectiveness.

### The solution

The existing system included an operation of three waste water pumps on the basis of a constant level in the intake well. For achieving this, these pumps were equipped with one frequency converter and controller, which enabled alternating operation every 24 hours and a possible operation of all three pumps – if needed. This solution was very complex and caused a lot of problems.

Grundfos offered a replacement of the existing controller for the three main sewage pumps by Grundfos Dedicated Controls with integrated GRM module CIM 270 for data monitoring.

At stage no. 1 Grundfos' solution offers frequency converters for each pump instead of one frequency converter for three pumps, resulting in easy operation by Grundfos Dedicated Controls.

Unfortunately the installed controller was not able to support this idea, so it was decided to connect only one frequency converter, which controlled only one waste water

pump whereas the second pump was kept in reserve and the third pump switched off due to low flow rate. This solution did not include alternating operation.

At the end of 2010 Grundfos and Kuldīgas Ūdens SIA entered the second stage of this project. The plan included to equip also the second pump with a frequency converter and to upgrade the existing Dedicated Controls with a new version. So the technical director Mr. Agris Alkšņuzars was able to operate with many frequency converters.

Also stage 3 was entered at the end of 2010. At this stage it was decided to equip three new waste water pumping stations with Grundfos SEV pumps, Dedicated Controls and CIM 270 modules and two new plants with Grundfos SLV-E AutoAdapt CIU 271 pumps and modules. All stations were connected to Grundfos GRM (Grundfos Remote Management) system.

### The outcome

The installed system (Grundfos Dedicated Controls and Grundfos GRM) provides a safe and secure solution. The customer's main request – getting an overview of operation processes of the waste water treatment plant from its offices – was completely fulfilled. Thanks to Grundfos GRM Kuldīgas Ūdens SIA gets information about the operation conditions via email and SMS.

Andris Klavins, Kuldīga's water director, states: "Grundfos GRM solution has proven it's efficiency and safe operation. The decision to install Grundfos GRM system at our plants is – to some extent – based on the simplicity of the system and our previous relations with the Grundfos company. Besides, we see perspective for Grundfos GRM to be used with other pumps, pump systems which are under our supervision."

**Advantages at a glance**

**Grundfos Remote Management (GRM):**

- Low installation and service costs
- Opportunity to review the operation of the systems from anywhere you have internet connection
- High level of system security, since its activity is maintained from IT professionals
- Saving trips and service visits to installations - able to maintain the system from any computer with internet connections (e.g. system re-start and basic configuration)
- Schedule graphs helps to understand and optimize system performance
- In parallel the system is being monitored by Grundfos – a professional pump company



Screenshot of the GRM (Grundfos Remote Management) system, which offers a full overview of pump operation, performance and trends.



### Grundfos Remote Management (GRM):

With this secure and reliable remote management system, you can monitor and manage your pump systems from an Internet PC at a very low price. Grundfos Remote Management is a cost-effective and straightforward way to monitor and manage pump installations in commercial buildings and in water supply and wastewater infrastructure. It reduces the need for onsite inspections, and in the event of an alarm or warning, the relevant people are notified directly. Compared to mobile phone based monitoring, the system offers a wider range of benefits and functionalities. For those who do not require remote process automation, Grundfos Remote Management is the ideal solution for monitoring and remote control as opposed to traditional SCADA systems. Initial investment is minimal, and a fixed low fee covers data traffic, hosting costs and system support, including back-up of all data. The CIU271 communication interface enables data transmission via GPRS/SMS from your Grundfos pumps and controllers. The built-in multi-purpose I/O board allows you to connect sensors and switches.