Ewon® BY HMS NETWORKS

Case study:
Water Management

Customer:	Aquaflot
Country:	Czech Republic
Solution:	On-premise Data Monitoring

Benefits

- Collect the larger number of Data in short time
- Save money for future plan
- Avoid major problem in the future

"We were already able to deal with the negative factor prior to the implementation thanks to this structure."

Tomáš Šindelář, Manager

Monitoring the operation of waste water pumping stations

A company from Czech Republic charged the corporate Aquaflot to build a new cutting-edge waste water treatment plant based on an existing one. To be able to design such a construction, a large quantity of data needed to be collected about the existing building and its working process.

As the plan needed to be draw as fast as possible, Aquaflot wanted the quickest way of obtaining the data without interfering with the waste water treatment plant control system.

Therefore, they chose to connect an Ewon router to the PLC SIMATIC S7-300 of the current station. This installation enables them to collect and archive values from the system into the Ewon router internal memory. By this way, the operator can connect to the router locally or remotely, select the monitored values and even select the time period to be displayed on the chart.

Pieces of information such as the total daily volume of waste water or the pH values, the minimum and maximum inflows, the water level in the storage tanks, etc., are then easy to reach in the means of Ewon technology.

Cellular connection

The customer was located nearly 200 km from the company working on the design; therefore the cellular mobile operator service was used to transfer data between the company and the Ewon router. To obtain the required information, the Ewon industrial router needed to be installed in the switchboard for a few days only; it was then returned to the company.

The entire installation consists of connecting the 24 V DC supply voltage, a cellular antenna, and an MPI connecting cable between the PLC and the router, and inserting the mobile operator's SIM card. Finally they obtained a full set of information about the working process of the waste water treatment plant.

« Obtaining a picture of the inflows during the day was important. A high unevenness would greatly affect the operation of the new waste water treatment plant. The charts show that this is exactly what happens every day in this treatment plant.» Tomáš Šindelář, Manager.

The data collected using the Ewon router helped to ascertain that two pumps instead of the original three will be sufficient for the renovation.

Prevent potential issues

The great advantage is that the company was already able to deal with this negative factor prior to the new water treatment plant implementation, which is a much cheaper procedure than launching a solution only after the manufacture and start-up of the new waste water treatment plant. If they had exclusively relied on the data received from the customer, which only indicated the average flow rate, this would have led to a major problem.

The second key factor that had to be monitored was the unevenness of inflow on different days. The pumping station was monitored for seven days in order to compare the situation on different days of the week.

The data collected using the Ewon router helped to ascertain that two pumps instead of the original three will be sufficient for the renovation. The economy in each pumping station represents one pump, which amounts to a financial saving of approximately 70000 CZK (2.702 EUR approx.) in one pumping station.

The Ewon router is a very efficient tool for monitoring the operation of equipment, as well as data collection and data evaluation. The router enabled remote access to the PLC Simatic S7-300 equipment via cellular network and gave the company the opportunity to choose the values that would be monitored and archived.

> *"Ewon was the quickest way of obtaining data without interfering with the plant control system."*

Learn more on www.ewon.biz

The Ewon Flexy is a multipurpose internet data gateway that allows Machine Builders to monitor and collect vital KPIs for analysis and predictive maintenance.