

Telemetry monitoring of the water consumption at Cheminova, Denmark

The new technology is now in operation at the large chemical factory for steering and control of pumps at the wells.

The use of wireless communication equipment is growing with an explosive pace within areas where it is of vital importance to control and transfer data from one place to another.

Telemetry - a combination of a GPRS- and I/O-module and a PLC controller – is one of the technologies which today are used for control and data transfer within many industries. The chemical industry Cheminova is located close to Lemvig city in the northern part of Denmark is producing a large range of plant protection products with a huge export world wide. Cheminova is one of the factories which have started using the telemetry technology for steering and monitoring of their pumps which are securing that the factory has sufficient fresh water available for the production.

Signalix has been responsible for the programming, the supply and installation of their telemetry modules at the factory, which due to excessive demands after their products, need to keep the production running for 24 hours.

Replace obsolete radio system

The telemetry system is communicating with four of our wells located approx. 5-6 kilometres south of the factory heading toward the Harboore city. The telemetry system has been in operation for 12 month now without any technical problems, not

even problems with the implementation of the system. We are therefore very satisfied with the technical solution supplied by Signalix after our specification and request for the functionality says the Chief of Construction Niels Kirkegaard Bakdal!



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Until we got the new telemetry technology installed we were using a radio communication system for the start/stop functionality of the pumps depending on the required amount of water for our production. However, we received a request from the local authorities asking us to limit the use of the fresh water, to avoid the risk of saltwater penetrating from the North Sea into the fresh water system and subsequently destroy the fresh water reservoir.

We would have a server problem if we should follow the authorities' request as it would be impossible for us to continue to use the old system! The supplier of the old pump system does not exist anymore

and getting spare parts where therefore out of the question. We realised that it would only be a matter of time before the entire system would break down!

Consequently, we took the decision to invest in a new communication technology which could fulfil our expectations and demands - continue Niels Kirkegaard Bakdal.

The rotation of the pumps are controlled relative to the water demand

The new system allows us to control and steer the four pumps from our energy plant and furthermore monitor the rotation and decide the exact amount of water we pump up of the wells for our 24 hours production. The system is computer controlled enabling us to exactly monitor the pumping status from the fresh water reservoir.

With the new system we feel it as the pumps are standing just next to us. All four pumps are operating in parallel with full control of the pump rotation, depending on the actual demand in our production - continue the Chief of Construction.

By the way, we were very lucky in the past that we actually found the water reservoir on the thin soil; we have at the vicinity of the factory. We managed to find a fresh water reservoir very deep down in the ground having a high concentration of sand. We are the sole user of this water reservoir; therefore, we don't need to utilise water from reservoirs used by respectively the cities Thyboroen and Harboore, located approximately 10-12 kilometres from our factory.

With this new system we have accomplished a new method in doing our pump operation. We are complete dependent on system reliability, as we can't maintain our production without water supply - add Niles Kirkegaard Bakdal!

Great confident to the new system

To the question what will happen if the system fails? The answer is that we have great confidence to the system and the supplier. If anything should happen to the system, the production in our factory will stop completely!

However, as security for maintaining the production, we still have the option in such case to let one of our employee take the car and drive out to the pump wells and manually adjust the pumps until the system is operating again.

The system is operating perfectly 24 hours per day. Signalix and their Technician have done a good job and they have our complete confidence conclude Niles Kirkegaard Bakdal.



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