



Safe measurement and control with Grundfos DID

**Water treatment solution for drinking
water pumping station in eastern Spain**

Simple installation, operation and maintenance with full connectivity
to existing systems.

GRUNDFOS 

Possibility in every drop

The situation

To treat and discharge drinking water, the supplier needs to monitor the concentration of treatment substances such as free chlorine in the water to ensure optimum disinfection of the drinking water making it suitable for consumption. In an optimally controlled disinfection process, analysers continually measure the presence of chemical compounds in the water in accordance with local regulations.

In a drinking water pumping station in eastern Spain, the equipment installed for this purpose had a small peristaltic pump adding sufficient chemical to correct the pH value for an accurate measurement. Subsequently, the reagent for measuring free chlorine was added. These chemicals however, were kept in separate plastic containers located in a box with the rest of the mechanisms necessary for measurement and control. The chemicals - both the corrector and the reagent - were affected by the heat, jeopardising the reliability of the measurement.

To make matters worse, the chemical inlet tubes were subject to rapid wear due to the operation of the peristaltic pump and needed to be replaced quite frequently. Moreover, in order to achieve an efficient control, sampling was sequential but very frequent. All things considered, the customer's existing solution was far from optimal. And for this reason, the plant manager requested information about Grundfos' measuring and control equipment, the Grundfos DID (Digital Instrumentation Dosing).



The solution

After visiting the plant with the pumping station maintenance manager, Grundfos proposed a DID system for continuous measurement and control, thus avoiding all the problems associated with the existing system while guaranteeing, of course, the compatibility of the installed equipment with the plant's existing data recording systems. The chosen solution would help simplify measurement and control and steer clear of the need for complex maintenance.

- **TOPIC:** Drinking water disinfection – measurement and control
- **LOCATION:** Drinking water pumping station (eastern Spain)



The outcome

“The response from Grundfos was, and continues to be, totally satisfactory, both in terms of speed, availability of their technical staff, clarity of product presentation and technical advice,” says maintenance manager at the drinking water pumping station.

Great communication and technical support throughout the process from solution design to supply and commissioning have been key in guaranteeing the success of this solution. The solution supplied with the DID system is easy to install and simplifies maintenance as the analyser is practically maintenance-free. The probe makes for accurate and continuous measurement of free chlorine without the need for pH correction or the addition of any other chemicals as was the case with the previous system.

“Once commissioned, the equipment hasn’t caused any problems. It’s a big improvement compared to the previous situation. The installation of the equipment is very simple, although the first configuration and navigation through the various display menus could be more intuitive. When the configuration was done and the probe was polarised, which usually takes about 20-30 minutes, the equipment has worked flawlessly”, the maintenance manager states.

The technology of the DID system offers uninterrupted measurement, allowing for constant monitoring of the disinfection treatment and offering an improved responsiveness on the part of the operator in case of failure. This is unlike other systems which measure free chlorine at intervals of several minutes.

Today, after over three years in operation, the Grundfos team of experts has more than covered all the needs and expectations of the customer. The system is easy to maintain for the maintenance manager who has enough to deal with in his daily work. At this pumping station, they are grateful to have a solution that works flawlessly:

“[The equipment] does not require pH correction and has a high quality chlorine probe. It is only necessary to change the very small quantities of electrolyte, and in most cases, it is not even necessary to calibrate. In the case of this plant, the electrolyte is changed approximately every six months. Its analogue outputs make it fully compatible with existing data logging and real-time monitoring equipment in the plant,” says the maintenance manager.

In short, the Spanish drinking water pumping station not only benefitted from ease of installation and full connectivity with existing control and monitoring systems. They were also able to reduce costs and the level of maintenance without sacrificing measurement accuracy.

The high quality of the technical advice and the improvement in daily working conditions the customer has experienced has marked a turning point in the relationship between Grundfos and the plant manager.

Grundfos as a trusted partner

At every point of contact with our customers, we listen and do our best to understand their problems and the root cause, because only then can we propose the best solution.

Listening to the maintenance manager, we learned that he not only wanted to solve the measuring problem, but that simplifying the maintenance of the measurement system was necessary. Solving these problems is only possible through proper technical advice throughout the whole process.

At Grundfos, we do not want to be just another supplier; we want our customers to have a partner throughout the process of designing the technical solution and subsequent commissioning.

Customer testimonial

When asked if the customer would install other equipment of this type and whether he would recommend it to other maintenance managers, here's what he replied:

“Without a doubt! Due to the performance of the equipment, reliability, ease of transmitting data to SCADA or other platforms, technical support and cost compared to equipment from other manufacturers, not only do I recommend the use of this equipment, we have already purchased some more in other facilities we manage, and we will continue to rely on this product.”

