

Reducing maintenance costs in systems for drinking water production

IWB is the leading supplier of energy, water and telecommunication in the Basel region of Switzerland. IWB produces drinking water (flow of around 645 l/s) in large and complex around 100,000 residents, small and medium sized companies, industry and administration with drinking water of very high quality. To ensure this water supply, IWB relies on measuring systems such as the ultrasonic flow switch from Anderson Högels to protect against the dry running of pumps and to provide reliable flow monitoring in the supply lines.

The requirement

Flow switches are installed in the supply lines of every pump train. These protect the pumps against dry running, and monitor and ensure the tightness of taps and check valves.

The Anderson Högels solution

Flow switches of type FWS-644 can be installed into the water lines without dead space and thus absolutely hygienically using the CLM-Block installation system. The system, which is based on the ultrasonic measurement principle, detects very small particles and air bubbles in the water. Ultrasonic waves are reflected by these elements and returned to the receiver of the transmitter. The difference between the sent and received waves is a measure of the speed of motion of the particles or air bubbles, and thus of the flow rate. Because this measurement procedure is very fast (response time < 1 s) and absolutely independent of temperature influence and medium conductivity, it is ideal for use in flow sensors that handle rapid current loads.

Why the customer decided for Anderson Högels

In the past, the customer had been using electromagnetic flow switches, which regularly developed line deposits and caused producing reliable measurement signals. As a result the individual pump stations had to be manually maintained to a great extent in a time-consuming procedure (approx. 15 man days). This required complete drainage of the supply lines to remove the electromagnetic sensor and remove the line deposits. All flow switches of type FWS-644 are equipped with high precision measurement electronics, and the measurement tip in contact with the product is coated with PEEK plastic, which is approved for the food industry. IWB guarantees the deposit of foreign matter such as line entirely or in a large extent. Even if deposits do accumulate (eg. a thin layer of lime), the ultrasonic measurement principle continues to operate reliably, until the ultrasonic measurement principle. This ensures that need to regularly perform costly and time-consuming maintenance and cleaning.

Customer

IWB, 40104 Basel



Line deposits on the electromagnetic flow switch



Installation situation



Flow switch FWS-644



Installed FWS-644



Flow switch

Flow switch FWS-644
 Part No. 644 01 00 00 00

CLM-Block installation system

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