

Case History no. 6 – spring Water Filtration

Fluid	: Well water
Temperature	: ambient
Pressure	: 3 – 4 barg
Retention rating	: 25 - 30 micron nominal
Flow rate	: 8000gph (133 gpm) = 936 M3/hr (10.10 lps)
Line size	: 4"

A leading bottler of spring water and manufacturer of soft drinks had been using Ronningen-Petter bag filters as the first stage filters in their plant for many years. They use them for both filtering the water and filtering sugar syrup.

Problem:-

They wanted to automate their facility to a greater degree and do away with the necessity for manually cleaning and inspecting the first stage filters which filter the water as it leaves the well supply.

Solution:-

We gave a Ronningen-Petter automatic backwashing filter which actually utilises the same polypropylene filter media as the bag filters. It consists of several filter vessels mounted in parallel on common inlet, outlet, drain & backwash supply headers. Each vessel contains a polypropylene filter sleeve supported by a perforated st.st. core.

A DP switch monitors the rise in pressure drop across the filter as it stops debris and gradually blocks. At a present point typically 10 – 15 psi pressure drop a backwash for 10 12 seconds by reversing flow through it and to drain. The other vessels remain on stream to provide an uninterrupted supply to process. Backwashing only occurs as is needed as dictated by the solids loading.

Result:-

They purchased a 5 station filter with an additional blank station which can be filled at a later date to provide increased capacity. It is an external backwashing unit i.e. it uses a pumped supply of clean water for the purpose of backwash. Upon installing it they remarked that they were able to see the bottom of their storage tanks for the first time in many years.