

NIVELCO CASE STUDIES

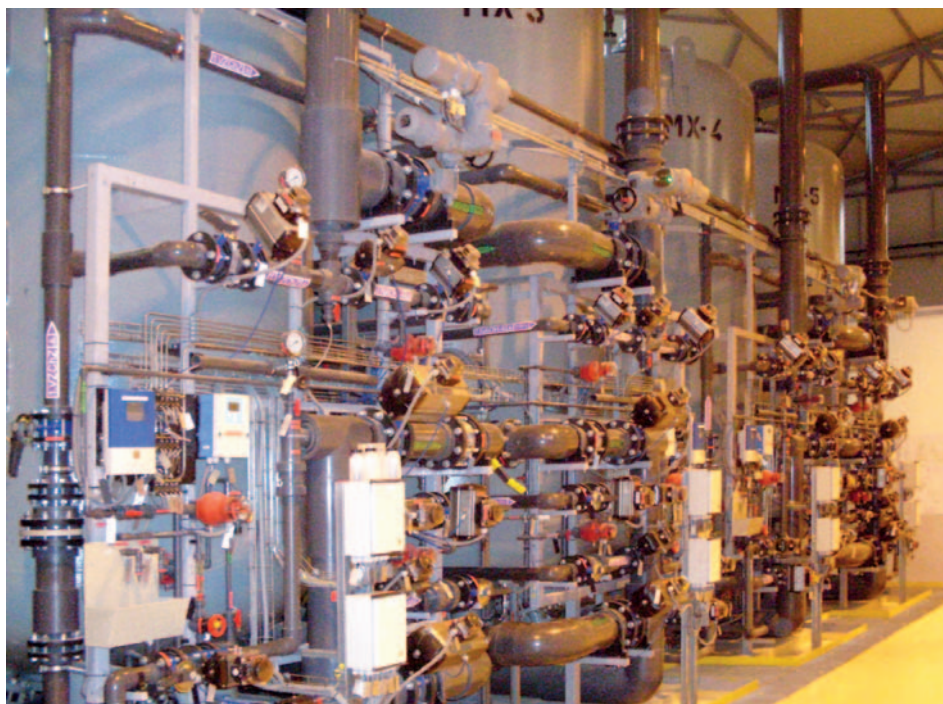
INSTRUMENTATION FOR WATER TREATMENT

Hidrofilt

Natural waters in most cases are not suitable for communal or industrial applications. The parameters of these waters are influenced by the organic and non-organic components as well as the mineral content. Nivelco Co has a long lasting relationship with Hidrofilt Ltd. This company is known as a specialist in water treatment technologies, they have great experience in system design, production and installation. The custom designed systems are constructed according to the properties of the local water resources as well as the customers' specific needs. Devices in their technology are mechanical filters, ion exchange columns, reverse osmosis filters (RO), electro deionisation devices (EDI) and accessories and supplementary instruments. These devices perform reliably only under controlled pressure, temperature and flow conditions. For this reason automated supervision of the systems is a must.

The monitoring of these parameters is done by Nivelco's instruments. In the bigger systems intelligent transmitters are applied to measure physical and electro-chemical parameters. The digital HART signal superposed on the 4...20mA current loop allows the users to program the devices or to set any service parameters remotely with the use of the appropriate software.

For temperature and pressure measurement THERMOCONT T-500 and NIVOPRESS D-400 type transmitters are installed respectively. Supplementing these technologies are other storage tanks usually containing raw or purified water. The transmitters of EchoTREK ST-300 family are applied for the level measurement in these tanks. To ensure reliable operation of the water treatment technologies from time to time chemical treatment of the system is necessary.



Hidrofilt designs fully automated systems, so it is important to continuously monitor the level in the tanks containing various chemicals. The measurement principle most suitable for a given application depends on the kind of chemical stored and its properties.

For mediums likely to produce foam usually NivoTRACK M-500 or



MicroTREK H-400 type instruments are applied. According to regulations chemical tanks must be equipped with both high and low level switches. This function is realised with RF-400 type vibrating fork switches.

The quality of high purity waters can be tested by measuring water conductivity. AnaCONT LCK compact conductivity transmitters are used for this purpose. To check acidity or alkalinity of the fluids we offer AnaCONT LEP pH transmitters.

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