Memtrex* HFE provides operating benefits to medical products manufacturer

CASE STUDY | Pharmaceuticals

| Challenge

A medical products manufacturer was looking for ways to improve their production processes. Medical products must be of the highest purity, as they are used in sterile environments and are used in contact with patients. In this example, the products are topical gels used for skin preparation prior to EKG testing and conductive gels used in the EKG test itself. The manufacturing process involved blending of the compound components with ultrapure water. Filtration at 0.2-micron was required for bacterial control, and the filter required chemical resistance to the gel materials. Following the blending process, the filters were removed, and the entire system was ozonated to ensure a sterile system.

| Solution

Veolia presented the Memtrex HFE filter to the customer (Figure 1). The MHFE was recommended because of the 0.2-micron rating and its all fluoropolymer construction. The 0.2 rating assured bacterial and particulate control. The all fluoropolymer construction meant that the filter would withstand the most aggressive chemicals, with the added benefit of ozone resistance. The customer was interested in the potential performance benefits and the process benefits of an all-fluoropolymer filter in their application, so agreed to trial MHFE filters on their process stream.

| Results

A manufacturing run was scheduled with Memtrex HFE in place of the existing polypropylene based cartridge. Blending proceeded as usual, introducing the chemical components to the ultrapure water and reducing to the required concentrations and viscosities. Production monitoring equipment was used to validate the performance of the MHFE in the process. Following the batch run, the system was flushed with ultrapure water and sterilized with ozone with the MHFE filters in place. With the MHFE in place of the original filter, the manufacturing team was able to leave the filters in place and ozonate the system following the batch run. This reduced the time associated

Figure 1: Memtrex HFE Filter

with changing filters, sanitizing, flushing, and replacing filters. Productivity and operational efficiency was improved, resulting in lower costs and faster production cycle times.

| Memtrex HFE Background

Memtrex HFE are made entirely from fluoropolymer materials, including Halar (ECTFE) (Halar is a trademark of Ausimont.), and PTFE. Halar is an industrial-grade fluoropolymer with excellent solvent resistance. MHFE filters can withstand the harshest process conditions due to its construction using these highly resistant materials. Providing broad chemical compatibility, you can count on our filters to produce consistent, uniform process streams in your most demanding filtration applications. Some of the features and benefits of Memtrex HFE are:

- High flow rates
- High-purity results with absolute rated efficiencies (99.9% filtration efficiency at rated pore size based on ASTM F795 and F661 test methods)
- Outstanding performance in harsh chemical environments
- Manufactured and packaged in a cleanroom environment for assured cleanliness
- Typical applications include:
    - Medical products
    - Chemicals
    - Microelectronics
    - Pharmaceuticals

Veolia's filtration products provide customers improved technical performance and often reduce operating costs. If you would like more information about how Veolia filtration products can provide you with the same, please contact your Veolia account representative or visit our website www.veoliawatertechnologies.com.

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