

Veolia's Z.Core* improves the beer brewing process

CASE STUDY | Food & Beverage

| Challenge

Typically, when brewing beer, Diatomaceous Earth (DE) provides primary filtration. Though effective, DE particles and yeast tend to bleed through, causing excessive and unacceptable turbidity in the beer. In some cases, DE sediment can also gather in the beer bottles. This DE sediment is commonly removed through a filter prior to the next process step; this filter is called a trap filter. Trap filters must be highly efficient, durable, and have long filter life.

A brewing customer of Xylem, a Veolia partner, wanted a filtration solution that eliminated the sediment and maintained the turbidity requirement. In addition, the customer also wished to be able to periodically sanitize the housings without having to remove the filters.

| Solution

The application required the solution to have a resistance to hot water sanitization (90°C), high particle retention, a long lifetime, and resistance to bleed-through.

Veolia's Z.Core filter is manufactured using Z.Plex* (Figure 1) filter technology which is engineered to address a number of these properties. The filter composition incorporates small diameter fibers and an innovative 3-dimensional fiber matrix. In addition to the structural strength of the fiber matrix, a polypropylene support core gives the filter strength and temperature resistance. This unique construction allows for excellent removal efficiency, high contaminant capacity and long filter lifetime.

Given the challenges faced and the properties of the Z.Core filter, the 3 micron, 40" ESS model was chosen as the best solution for the problem.

| Results

The Z.Core filter met the customer's expectations with regard to turbidity and resolved the sediment issue. In addition, the Z.Core filter had a longer lifetime, lower pressure drop, and higher temperature resistance than the existing product for the application. An added benefit is that the robust Z.Core allows for in-line sanitization. Because of these advantages, Xylem replaced the customer's existing product with the Z.Core 3 micron, 40" ESS.

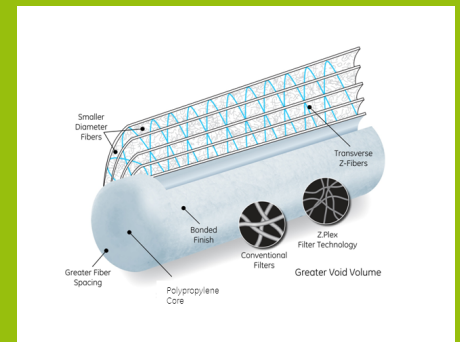


Figure 1: Patented Z.Plex Filter Technology
 Patent Numbers: 6,916,395, 6,938,781, 6,986,427

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