# Processing high viscosity fluids with Veolia's Z.Core filter technology

**CASE STUDY |** Chemical Processing

## | Challenge

The chemical processing industry faces a number of challenges in filtration due to the specific properties required for a filter in different applications. For thermal substrate production the feed stream contains high viscosity (>150 cps) solutions of aluminium and copper slurry dispersed in propylene glycol or methyl ethyl ketone.

A common problem in this industry is when filters unload at a high pressure drop and pass large particles causing disruptions to the processes.

## | Solution

For this type of application the filter has to have a number of properties to ensure that it will be effective. It must withstand heavy loading, resist bypass of large particles and be resistant to ketones. To meet all of these requirements, Veolia offered a particular customer the Z.Core 100 micron 20", DOE filter.

Z.Core is manufactured using patented Z.Plex* (Figure 1) filter technology and is engineered specifically for high strength filtration.

The Z.Core filter composition incorporates thin fibers and an innovative 3-dimensional fiber matrix. This matrix greatly increases the filter's particle holding capacity and reduces pressure drop, all while maintaining its structural integrity.

## | Results

To prove the improved performance of the Z.Core, the customer performed a comparative filter test versus the existing filter product. The results of the comparative test showed that the Z.Core provided twice the lifetime of the competitive product and did not allow any bypass of large particles at high pressure drops. The chemical processing company decided to use the Z.Core filters over the existing product and have had them in service for over a year.

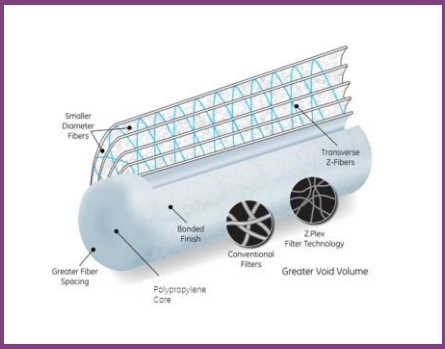


**Figure 1: Patented Z.Plex Filter Technology**
**Patent Numbers: 6,916,395, 6,938,781, 6,986,427**

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