

METAL FIBER MEDIA FILTRATION SOLUTIONS FOR HYDRAULICS

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The Engineering Operations Department of a major operator carried out an investigation into the cause of malfunctioning hydraulic equipment in some of their helicopters. Their researchers determined particulate contamination in the hydraulic fluid to be a cause of the malfunctioning. This led to a review of the filtration media utilized for the filter elements. The filtration media review, which took over a decade, compared glass fiber and metal fiber filtration media in a number of tests. These tests included the development of the Dynamic Filtration Efficiency test method, which mirrors real world operation more closely, and 1000's of hours of in-flight testing. The tests showed that Bekaert metal fiber media provides a much better fluid filtration compared to glass fiber media (NAS Class 0 versus NAS Class 9). It also proved that the improved fluid cleanliness significantly reduced the need for maintenance and component replacement. As a result, maintenance costs for the helicopter fleet dropped over \$4M in one year.

In our presentation, we will detail the production process of Bekaert metal fiber media, its inherent properties and how it outperforms other media when used in hydraulic fluid filtration. We will outline the contamination problem inherent to hydraulic systems. We will share the findings of external reviews and the significant cost savings high-end users made by applying Bekaert metal fiber filtration media in their hydraulic systems.