

TECH TIP PROVIDED BY ONE EYE INDUSTRIES

Magnets at Work

Better filtration saves space and removes contaminants

Most maintenance personnel and industry research agree that ferrous metal contamination under 10 microns in size is most damaging in hydraulic fluid systems. "By removing ferrous metal contamination, equipment productivity is increased and fluid life and maintenance intervals are extended," says Roger Simonson, President of One Eye Industries (OEI).

Robert McQuinn, Technical Sales Representative, Hydraulic Systems and Services, Wajax Industrial Components, distributes for OEI in Calgary, Alberta. He recommended using OEI magnetic filtration products for slant rigs at Precision Drilling. Brent Pavelich, Precision Drilling's Equipment and Maintenance Manager, quickly saw the value of OEI magnetic filtration compared to traditional filter media.

"On Drill Rig 300 — the ISO count was 19/15 with a 5 micron count @ 3,719 and 10 micron count of 778 PPM — prior to installing OEI magnetic filters," says Pavelich. "After 3 months of operation, the ISO count was 16/13 with the 5 micron count @ 505 and 10 micron count of 149 PPM."

Understanding the importance of filtration and the restriction of space on equipment, OEI has designed magnetic scrubbers and magnetic filter rods, which can be inserted into most existing filtration systems. They remove damaging contaminants while conserving space in the system. The technology protects the operational integrity of a system's hydraulic pumps by removing both ferrous and non-ferrous contamination to sub-micron



Precision Drilling (Rig 300) is now protecting its equipment and improving reliability with OEI magnetic filtration.

levels. By filtering hydraulic and other fluids to lower ISO levels than industry standard, the technology extends fluid and component life by 2 to 3 times. This increases the reliability of equipment and production value.

OEI stainless steel magnetic scrubbers offer a filtration capability of 200+ to sub-micron. The scrubbers are designed with no internal flow restriction, as this is regulated by the diameter of input and output supply. The unit is a predictive maintenance tool and captures contamination that can be analyzed to determine wear trends. The magnetic scrubber is designed for pressure capabilities

up to 500 PSI. Products for higher pressure systems are also available.


OEI magnetic filter rods can also be placed into existing filters, and are designed to increase filtration capability to sub-micron levels of ferrous and non-ferrous contaminants. With a life expectancy of over 10 years, the magnetic filters are easy to install and clean. Custom OEI magnetic filter rods have been designed for OEM filters, such as Atlas Copco, CAT, P&H, Komatsu, Liebherr, John Deere, Hitachi, Parker, PTI, Stauff and Donaldson to increase the filtering capacity of these existing filters. 

Photo: Precision Drilling