



I have yet to come across serious discussions on the employment of quality filtration for all the applications on a windmill. There appears to be little interest in these two critical areas.

WHY DO YOU SAY THAT?

Our observations identified that the windmill OEM's and the service industries have a closed shop when it comes to aftermarket filtration technology. This is a similar culture to what we have experienced over the past 10 years in many other industries where many OEM's and the related service industry rely on parts and service to support their business model.

Over the past five years we have noticed a significant increase in the importance of equipment reliability in the mining and oil & gas industries by the OEM's and the end users. Reliability is the focus of informed maintenance managers, and quality filtration is the foundation of ensuring high cleanliness levels to extend equipment component life thereby increasing profitability.

TELL ME A LITTLE ABOUT YOURSELF.

In 1995 I invented a magnetic filter for the automotive industry as an aftermarket compliment to the traditional disposable paper filter. We conducted testing and product development for five years. We went to market with it in 2000 and found the domestic market to be a costly challenge to educate the customer of the value. In 2002 we redirected our marketing and sales into the industrial market. Acceptance of our technology was positive and in answer to application demand our product range of magnetic filters expanded to over 200 different formats. We supply our filters to the Oil & Gas, Mining, Manufacturing, Marine and Power Generation industries. Our main focus is for filtration of rotating equipment: hydraulics, gear lube, fuels and coolants.

HOW DID YOU BECOME INVOLVED IN THE WIND INDUSTRY?

We have been trying to enter the wind industry for about eight years and have found it's not a very friendly place to bring new technology to market. When I read product information to improve technology the focus is directed at component design and quality. Very little information is directed at the type and quality of lubrication oil, hydraulic and coolant fluid and management.

WHAT IS THE ONE EYE MAGNETIC FILTRATION SYSTEM?

OEI environmental industrial and magnetic filtration systems have been developed over the last 10 years and are designed to work with and complement existing traditional filtration and in many cases replace them. Incorporating the new rare earth magnetic technology in our patented designs allows filtration of ferrous and non-ferrous contamination down to sub-micron levels without flow restriction.

HOW DO YOU FILTER NON-FERROUS CONTAMINATION WITH A MAGNETIC FILTER?

There are two very simple ways. (1) Entrainment: This occurs when ferrous contamination (under 10 microns) makes contact with the non ferrous contamination and becomes entrained in the larger non ferrous contamination while in flow. (2) Static Adhesion: When flowing as gas or liquid through pipes a static charge is created and attaches itself to every particle in the flow. A static charge has a magnetic field. When the non-ferrous contamination is entrained with ferrous contamination and or has a static charge and exposed to our powerful magnetic fields they are trapped on our magnetic filters. This occurs in engine oil, gear oil, coolant, hydraulic and diesel fuel systems.

WHERE DOES THE FERROUS CONTAMINATION UNDER 10-MICRONS IN SIZE COME FROM?

There are many sources. (1) Equipment component manufacturing and assembling leaves this fine contaminant in the pores of the metal. (2) New hydraulic fluid, coolant, lube oil and fuels all have ferrous metal contamination under 10 microns to sub-micron in size resulting from corrosion and erosion of carbon steel storage reservoirs and pipelines that transport them to the end user. (3) Component wear (4) Inadequate air breathers on reservoirs and engines. Keep in mind your eye can only see particles over 40 microns in size. ↘

For More Questions and Answers with Roger Simonson, visit windssystemsmag.com.

