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***FILTERMAG***<sup>®</sup>  
**INDUSTRIAL PRODUCTS DIVISION**

# Hydraulically Driven Leach Pad Stacker

## Case Study

**\$3.5 Million Saved in Repairs and Lost Production**  
**90% Reduction in Particle Counts  $\geq 4\mu\text{m}$**

**Reduce Wear • Mitigate Damage • Increase Reliability • Extend Equipment Life**



**\$3.5 Million Saved**

**90% Reduction in Particle Contamination with FilterMag**

### **Hydraulically Driven Leach Pad Stacker Case Study**

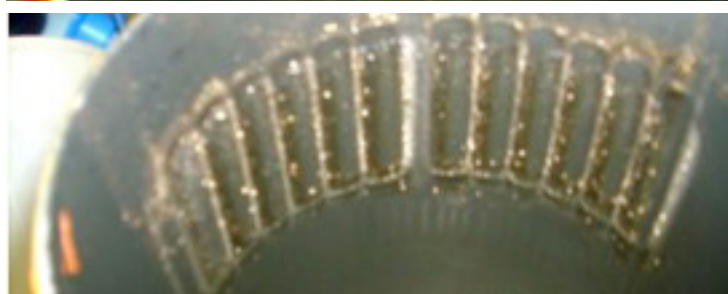
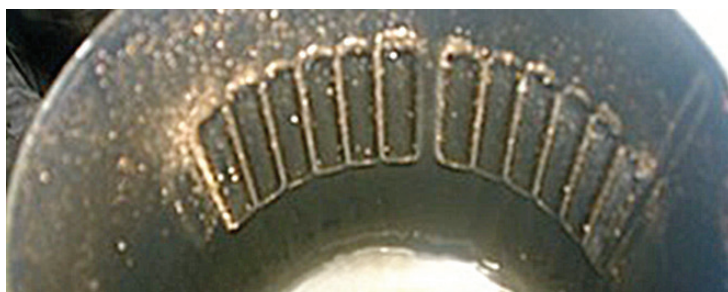
Four FilterMag CT4.9s were installed on each of the four high-pressure filters positioned immediately after the pump. The single return filter received four additional CT4.9s.

Three weeks after installation, a pump failure generated a storm of particles from the Nibral (nickel bronze aluminum alloy) impeller. Nickel is highly susceptible to magnetism, so **FilterMag caught 69 million particles** that would have passed through the 10  $\mu$ m filters contaminating the hydraulic piping system and degrading the process equipment.

Historically, this type of failure would require 4–10 days of downtime to repair. Cleaning out the hydraulic piping (pigging the lines) was a substantial part of the repair process. Because FilterMag captured virtually all of the impeller debris, the lines only required a flush. The pump, filters, and fluid were replaced and the leach pad stacker was back to work in less than two days.

**The mining company estimated they saved a minimum of \$3.5 million, thanks to FilterMag.**

**FilterMag results from four high-pressure pressure filters.**



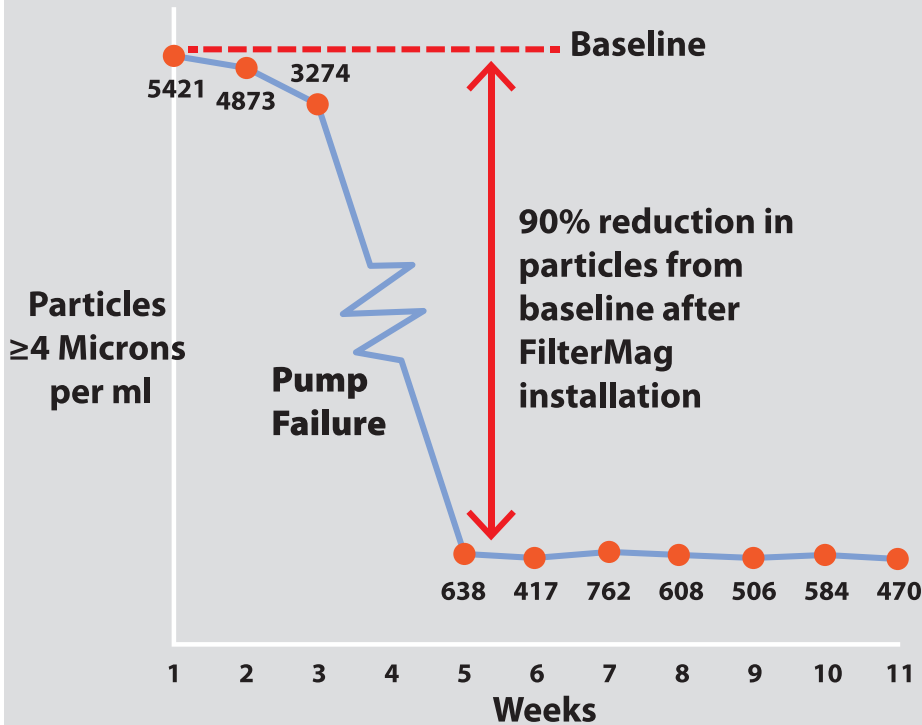
*Nibral particles captured by FilterMag in each of the four high pressure filters.*

**FilterMag results from the single return filter.**



*Notice the absence of shiny Nibral particles.*

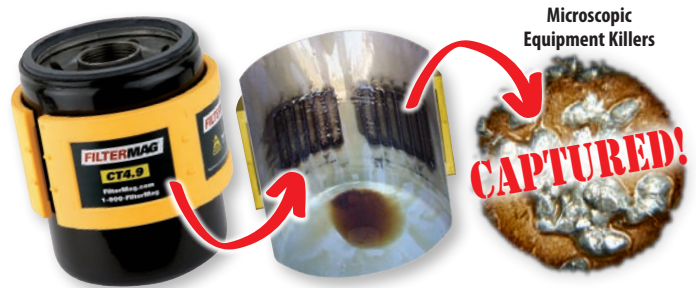
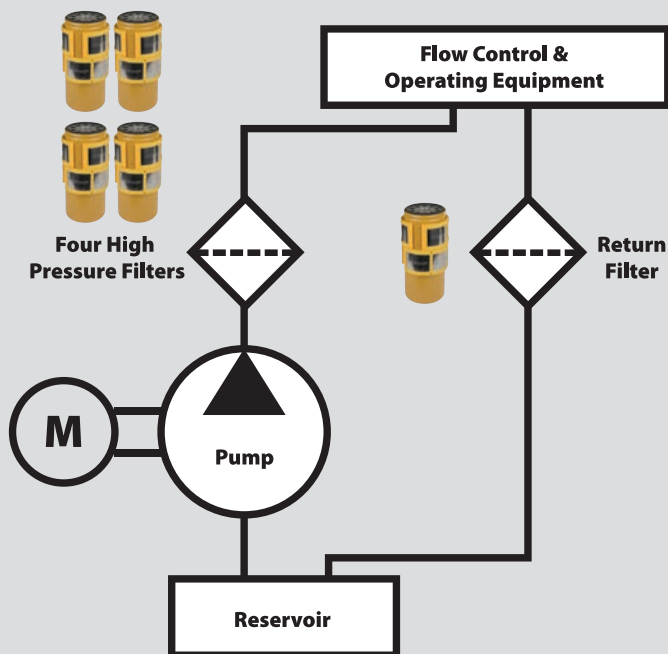
## 90% Reduction in Particle Contamination with FilterMag.



- \$3.5 million savings from greatly reduced time to repair and elimination of 3 to 5 days of lost production.
- 70% projected increase in system longevity by the reduction in contamination.\*

\*Projection by NORIA Life Extension Chart for hydraulics.

## FilterMag placement on high pressure and return filters



***FILTERMAG*** ***RESULTS***  
***Outside... Inside***

- ✓ Reduce Wear
- ✓ Mitigate Damage
- ✓ Increase Reliability
- ✓ Extend Equipment Life

***FILTERMAG***

## FilterMag Industrial Products

### Spin-on Filters USE **CT**



#### Applications:

- Gas & Diesel Engines • Rotating Equipment
- Hydraulic Systems • Diesel Fuel Filtration
- For most spin-on filter applications

Order part # based on oil filter diameter

Pairs		Fits Spin-on Filter Diameters		Dimensions			
Part #	Qty.	Minimum	Maximum*	Height	Thickness	Arc (Max)	Weight
CT3.2PR	2-ea.	2.9 in (74 mm)	3.5 in (89 mm)	2.65 in (67 mm)	.34 in (8.6 mm)	360°	18 oz (.52 kg)
CT3.8PR	2-ea.	3.6 in (91 mm)	4.4 in (112 mm)	2.65 in (67 mm)	.35 in (8.9 mm)	360°	28 oz (.80 kg)
CT4.9PR	2-ea.	4.5 in (114 mm)	5.5 in (140 mm)	2.95 in (75 mm)	.36 in (9.1 mm)	360°	38 oz (1.08 kg)

### Cartridge Filters USE **XT**



#### Applications:

- Rotating Equipment • Hydraulic Systems
- Gas & Diesel Engines • For most cartridge filters

Order part # based on outside diameter of filter housing

Pairs		Fits Outside Housing Diameters		Dimensions			
Part#	Qty.	Minimum	Maximum*	Height: Faceplate/Endcap	Thickness: Faceplate/Endcap	Arc (Max)	Weight
XT4PR	2-ea.	3.8 in (96 mm)	4.8 in (122 mm)	2.7" (68mm)/3.24" (82mm)	.9"(23mm)/1.4" (36mm)	330°	7.0 lb (3.2 kg)
XT5PR	2-ea.	4.8 in (122 mm)	5.8 in (147 mm)	2.7" (68mm)/3.24" (82mm)	.9"(23mm)/1.4" (36mm)	340°	9.0 lb (4.1 kg)
XT6PR	2-ea.	5.8 in (147 mm)	6.8 in (173 mm)	2.7" (68mm)/3.24" (82mm)	.9"(23mm)/1.4" (36mm)	344°	11.0 lb (5.0 kg)
XT7PR	2-ea.	6.8 in (173 mm)	7.8 in (198 mm)	2.7" (68mm)/3.24" (82mm)	.9"(23mm)/1.4" (36mm)	348°	13.0 lb (5.9 kg)
XT8PR	2-ea.	7.8 in (198 mm)	8.8 in (224 mm)	2.7" (68mm)/3.24" (82mm)	.9"(23mm)/1.4" (36mm)	350°	15.0 lb. (6.8 kg)

Operating Temperature Range: -40F to +302F (-40C to +150C) • Magnet Type: N42SH (High Temperature Nd-Fe-B alloy) with Ni-Cu-Ni plating\*Maximum size may be significantly less on Aluminum and Plastic Housings.

## Easy Installation: SNAP ON, SLIDE OFF, REUSE



1. Install two or more FilterMags on each spin-on filter opposite each other near the threaded end.
2. Reuse FilterMags by sliding them off the old filter and snapping them on a new one when the filter is changed.



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