Monolec® Synthetic Industrial Lubricant (9220)

City of Seaford WWTP – Seaford, Delaware

EIMCO® Gearboxes

• **Oil maintains good condition after 10 years in use**
• **Oil analysis results indicate no wear in the gearboxes**
• **Customer is pleased: "Oil looks like new."**

Customer Profile

Seaford, Del., is located on the banks of the pristine Nanticoke River. It was named the 28th best small town in America in the 1995 book "Best 100 Small Towns in America." Seaford's wastewater treatment facility is considered one of America's best because of its continuous upgrades and its programs to increase production values. It offers the residents of Seaford the highest standards in wastewater treatment. The city upgraded the facility in 1998 to a biological nutrient removal process designed to treat 2 million gallons of water per day. The process stabilizes organic and nitrogen compounds and removes phosphorus compounds. Following the BNR process, the treated water is filtered, disinfected and dechlorinated prior to being discharged from the facility. This process results in a plant effluent that is of exceptional quality.

The sludge generated during wastewater treatment is sent to the facility's composting operation. Here, the solids are dewatered, mixed with woodchips and composted in aerated composting bays. After composting, the woodchips are removed from the material using a mechanical screen. The composting process stabilizes the organic compounds and destroys any pathogenic organisms. The result is a rich "Class A, exceptional quality" end product, by EPA standards. The resulting compost is beneficial to improving poor soils for better nutrient and water retention, and may be used on lawns, gardens, flowerbeds and golf courses.

Application

The city of Seaford uses several EIMCO gearboxes in the process basins, which were installed in 1998 during the plant upgrade.

Challenge

While using a commercial grade compressor oil, maintenance operators noticed that the compressors ran very hot and shut off automatically on high-temperature alarms. They also had excessive oil seepage. When the new gearboxes were installed in 1998, plant operators decided to incorporate the highest quality lubricant to protect the city's investment. Each of the gearbox units hold 15 quarts of oil and is in operation 24 hours per day, seven days per week.

LE Solution

The local LE lubrication consultant recommended LE's Monolec® Synthetic Industrial Lubricant (9220) for the gearboxes. Monolec 9220 provides long service life through excellent thermal stability and oxidation resistance. It contains Monolec, LE's exclusive wear-reducing additive, and is well suited for enclosed gearboxes.

Results

"We have almost no equipment failures while using LE lubricants," said Bryant Tifft, operations coordinator. "We have never seen anything better, so why would we choose another lube company? It simply is the best investment for our money."

The plant also uses LEAP, LE's oil analysis program, to continuously monitor and test the condition of the oil. "We only have oil analysis reports for six years, but the oil is older than that," said Brian Murphy, maintenance operator for Seaford. "The oil looks like new." (A 2008 LEAP report, indicating the good condition of the oil after nearly 10 years of service, is shown below.)

Other LE Products Used

- Almaplex® Industrial Lubricant (1275)
- Duolec® Vari-Purpose Gear Lubricant (1605)
- Monolec® GFS Engine Oil (8440)
- Monolec Ultra® Engine Oil (8800)
- Syntemp® Synthetic Lubricant (9102)

Thank you to Brian Murphy, maintenance operator, Bryant Tifft, operations coordinator, and Chris Nowlen, LE lubrication consultant (pictured), for providing the information used in this report.

UNIT ID ANOXIC MIXER 2-2
SECOND ID

UNIT TYPE GEAR BOX/GEAR SYSTEM
APPLICATION PLANT/INDUSTRIAL

COMPANY INFORMATION
CITY OF SEAFORD
WWTF
403 NANTICOKE AVE
SEAFORD , DE 19973

ACCOUNT NUMBER 59300007270005
DATE SAMPLED 10/08/08
DATE RECEIVED 10/10/08
DATE COMPLETED 10/14/08

TRACKING # 06266L01255
MANUFACTURER/MODEL EIMCO
LUBE MFR LUBRICATION ENGINEERS
LUBE TYPE - GRADE 9220 MONOLEC SYNTHETIC IND OIL ISO 220
MICRON RATING 0
FILTER TYPE NONE
SUMP CAPACITY 3.00
HYD SYSTEM PRESSURE 0
FLUID ADDED

OVERALL SEVERITY OF REPORT
based on comments, not individual flags

0	1	2	3	4
NORMAL		ABNORMAL		CRITICAL

LAB # 955501 **LOCATION** I **ANALYST** RNF

FLUID ANALYSIS REPORT - 877-806-3750

COMMENTS Data indicates no abnormal findings. Resample at normal interval; Please provide unit model number so we may compare data to the proper standards for this unit;

SAMPLE #	IRON	CHROMIUM	NICKEL	ALUMINUM	COPPER	LEAD	TIN	CADMIUM	SILVER	TITANIUM	VANADIUM	SILICON	SODIUM	POTASSIUM	MOLYBDENUM	ANTIMONY	MANGANESE	LITHIUM	BORON	MAGNESIUM	CALCIUM	BARIUM	PHOSPHORUS	ZINC
	WEAR METALS PPM											CONTAMINANT METALS - PPM			MULTI-SOURCE METALS - PPM					ADDITIVE METALS PPM				
2	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	10	0	0	3	3	0	2	634	3
3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	0	0	0	0	0	699	2
4	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	695	3
5	2	0	0	3	0	0	0	0	0	0	0	1	0	0	0	7	0	1	0	0	0	0	666	7

SAMPLE #	DATE SAMPLED / DATE RECEIVED	UNIT TIME / LUBE TIME	LUBE CHG	FILTER CHG	FUEL Vol.	SOOT Vol.	WATER Hot Plate	VIS 40C CS	VIS 100C CS	TAN Total Acid	TBN Total Base	I-R OXIDA	I-R NITRA	ISO CODE	4 MICRON	6 MICRON	10 MICRON	14 MICRON	21 MICRON	38 MICRON	70 MICRON	100 MICRON
2	N/A 10/25/04		N	U			<.1	213		1.93												
3	10/05/05 10/26/05	32161	N	U			<.1	214		2.06												
4	09/28/06 10/12/06	40565	U	U			<.1	215		2.31												
5	10/08/08 10/10/08	56033	N	U			<.1	214		1.89												

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