



Monolec[®] R & O Compressor / Turbine Oil (6404-6405)

Sewage Plant – Pittsburgh, Pa.

Root Blower & Lightnin Mixers

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- **Decreased blower temperatures**
- **Reduced amperage**
- **Extended oil drain intervals**

Customer Profile

This sewage plant in the North Hills suburb of Pittsburgh, Pennsylvania, has experienced a number of benefits by using LE's Monolec[®] R & O Compressor / Turbine Oils.

Application

Average daily flow of sewage through the plant is six million gallons. Monolec R & O Compressor / Turbine Oils are used successfully in seven Roots blowers, size 10x16JV and 12 Lightnin mixers. The Roots blowers have 100 hp motors. The Lightnin mixers are coupled to 50 hp electric motors.

Challenge

The maintenance personnel wanted to see a temperature reduction on the Roots air blowers. In addition, they wanted an amperage reduction on the Lightnin mixers. The initial amperage reduction survey was conducted on three Roots blowers and six Lightnin mixers.

LE Solution

Monolec R & O Compressor / Turbine Oil (6405) was recommended for the Roots blowers. Amperage readings were recorded three times daily, over a two-week period, with the commercial grade lubricant. The blowers were drained of the commercial oil and Monolec 6405 was installed.

Monolec R & O Compressor / Turbine Oil (6404) was recommended for the Lightnin mixers.

Results

Once converted, blower temperatures decreased 25°F, and there was a 5 percent reduction in amperage using Monolec 6405 versus the commercial grade lubricant. After a period of two weeks, amperage readings were again recorded three times daily. The 5 percent amperage reduction remained steady. An electrical saving of \$4,899 per year was realized on the three blowers which operate 24 hours a day, year-round. In addition, they safely increased the drain intervals from six months to 24 months by the use of oil analysis.

A test was performed on one of the mixers to see the results of converting to Monolec 6404. First they recorded the three amperage readings daily, over a two-week period, using the commercial grade lubricant. The average amperage was 46.8 amps.

They then converted to Monolec 6404. After two weeks of run time, the amperage was again taken using a digital amp meter. Monolec 6404 yielded an average amperage reading over the two week test period of 44.9 amps, a 4.06 percent decrease. It was projected by Larry Boyle, LE lubrication consultant, and the plant engineer that Monolec 6404 will save the wastewater treatment plant \$3,977 annually on all six mixers which operate 24 hours a day year-round.

The manager also commented that the mixers were running quieter after converting to Monolec 6404. Oil drain intervals have increased from six months with the previous oil, to four years or 32,000 hours with Monolec 6404. Oil tests reveal very low wear and plant personnel love the labor savings realized over a four-year period.



Other LE Products Used

- Because of the excellent results with Monolec R & O Compressor / Turbine Oils, the customer is also using Almagard® Vari-Purpose Lubricant (3751) throughout the plant. Lubricant consumption has been cut by two-thirds over the previous plant grease.
- Upon completion of a plant lubrication survey, management initiated the use of Duolec® Vari-Purpose Lubricant (1605) in all gearboxes requiring an SAE 90 gear oil.
- Syntemp® Synthetic Lubricant (9102) is used on all cables and drive chains.
- Monolec R & O Compressor / Turbine Oil (6404) has provided trouble-free service in the plant reciprocating air compressors.

Thank you to the maintenance personnel at the sewage plant, and to Larry Boyle, LE lubrication consultant (pictured), for providing the information used in this report.



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Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

SIC 4952
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