

Case Study: Lube Oil Filtration
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Regency Energy Partners White Deer, Texas, USA

APPLICATION: Black Powder Contamination Removal from Compressor Lube Oil.

PROBLEM: Black Powder (made up of primarily iron oxides and sulfides) in the incoming sour gas was penetrating the seals and contaminating the compressor lube oil. They had two banks of 4 Baldwin filter elements in order to remove the contamination as otherwise they would lose the compressor. The contamination was causing the Baldwin filters to become saturated (30 PSI differential) every 30 minutes. Changing these was very time consuming and costly.

SOLUTION: Larry Etchison, Plant Superintendent, was determined to find a better way to protect the compressor and minimize manpower and expenses. They conducted a test using one OEI dual stage ADD-Vantage 9000 magnetic filter with stainless element prior to 3 of the Baldwin filters.

RESULTS: What the mechanics saw shocked them, not only had the PSI not risen above 10 in the first hour but when they removed the filter at this time a large amount of contamination had been trapped (Photo C). They changed the Baldwin filters out and reinstated the bank for four hours before hitting 30 PSI. The next run lasted 10 hours.

“Had the Baldwin filters alone been installed this amount of contamination would have saturated 30+ filters” stated Mr. Etchison.

Photos D & E show the trapped contamination after 10 hours of runtime.



RECOMMENDATION: Outfit these filter banks complete with 4 OEI ADD-Vantage 9000 filters in a duplex forma (holding capacity 8+lbs/bank) to extend the cleaning interval even further and protect the compressor. OEI also recommends the installation of a magnetic separator system for the inlet gas to reduce the contamination in the lube oil and protect the compressor and other system components inside the plant.

For more information, contact our office at 403-242-4221 or visit our website at www.oneeyeindustries.com