CASE STUDY

MIDEL®
SAFETY INSIDE

PROJECT: **Ethylene plant retrofill | Louisiana, USA**

ESTER TYPE: MIDEL eN 1204 natural ester (rapeseed/canola)

PURPOSE: Cost savings for ethylene manufacturing plant

[OVERVIEW]

When Southern Power Systems, a MIDEL Service Partner with operations throughout the mid-southern United States, was consulted on performing a transformer retrofill at an ethylene manufacturing plant in Louisiana, the company saw an ideal opportunity for using MIDEL eN 1204 natural ester transformer fluid.

MIDEL eN 1204 is made from sustainably sourced rapeseed/canola crops and is readily biodegradable, avoiding environmental damage should leakage occur and enabling reductions in containment measures. FM and UL approved, MIDEL eN 1204 offers the ability to safely increase transformer loading or reduce transformer size.

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[SITUATION]

The transformer in question, a Westinghouse 1500 KVA unit, was used to supply power into the facility's wastewater treatment plant. The transformer was situated in a remote part of the site, close to a wooded area where any mineral oil spill would cause significant environmental problems; but this was not the only reason a natural ester fluid was deployed.

Bruce Waguespack Jr, Technical Project Manager at Southern Power Systems, explained "When we look at a retrofilling situation, our considerations go beyond the immediate issues of how to handle the mineral oil in the legacy transformer. Because of our experience with ester transformer fluids, we can often identify areas of cost savings that otherwise might be overlooked."

In this case, the technical team advised that the cost of re-processing the mineral oil currently in the transformer would prove to be too expensive, considering all the equipment and processes needed. The alternative option of replacing the unit with a new transformer would be even more expensive.

Retrofilling with MIDEL eN 1204 (canola-based fluid) was especially attractive as its higher oxidization resistance over soybean-based ester fluid delivered a heightened level of reassurance to the customer.

[RESULT]

Southern Power Systems' customer was able to extend the life of the existing transformer, with a 50% saving over alternative actions. Retrofilling with MIDEL eN 1204 delivered the life extension, fire safety and environmental protection mandated by the customer.

The use of MIDEL ester fluids in this project supports the following UN Sustainable Development Goals:

SUSTAINABLE DEVELOPMENT GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

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