

Transformers

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MAGAZINE

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**A global mission – MIDEL ester
transformer fluids**



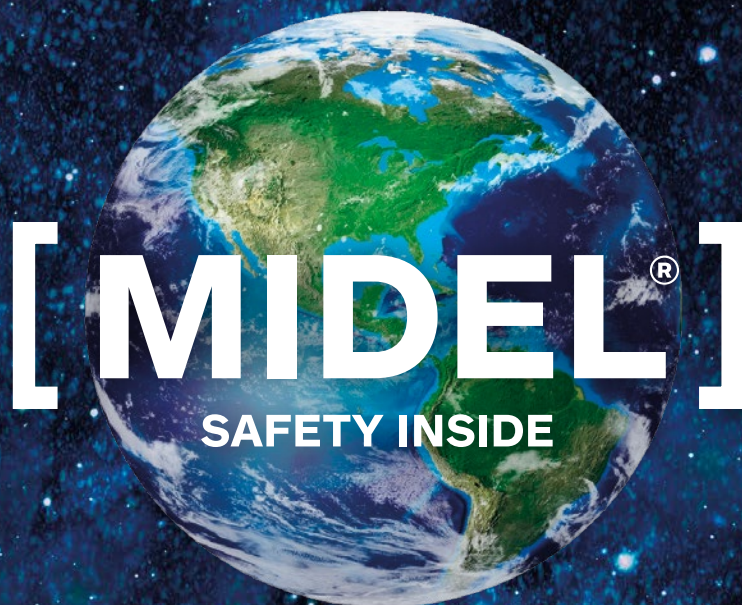
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▪ Safety mission ▪ Digital market ▪ Diagnosis in one day ▪ Greater load capacity ▪

The benefits of MIDE^L, from fire safety to environmental protection to retrofilling, are increasingly recognised across the global power sector



ABSTRACT

The properties of MIDE^L natural and synthetic ester transformer fluids include fire safety, environmental protection and transformer performance improvement. The market's response to the MIDE^L brand proposition has been overwhelmingly positive. Using MIDE^L can help achieve major installation and ownership cost savings by enabling a smaller substation footprint, reducing or eliminating the need for additional fire suppression systems, and reducing the need for containment to prevent leakage into the local environment.

KEYWORDS

MIDE^L, natural and synthetic ester, fire safety, environmental protection, risk mitigation

"Safety Inside" – MIDE^L's global mission

Introduction

"Every transformer deserves MIDE^L, because with MIDE^L there's Safety Inside," says Barry Menzies, MIDE^L's global managing director, talking about the growing global footprint of MIDE^L ester transformer fluids. He continues, "The benefits of MIDE^L, from fire safety to environmental protection to retrofilling

are increasingly recognised across the global power sector. In response, we have increased investment in our worldwide network of offices and in new manufacturing capabilities. Our continued investment includes technical application data, support through our technical and business development teams, manufacturing innovation and delivering excellence in customer service."

The properties of MIDEI natural and synthetic ester transformer fluids are well-known; namely fire safety (high fire point), environmental protection (readily biodegradable) and transformer performance improvement (extended cellulose life, high moisture tolerance, smaller transformers). MIDEI enables transformer users to save money while mitigating the risk of fire and environmental damage, encapsulated by the concept of "Safety Inside":

- Safety for people living and working near the transformer
- Safety for the environment around the transformer
- Safety for the buildings and businesses close to the transformer
- Safety for the investment in critical assets like transformers

The market's response to the MIDEI brand proposition has been overwhelmingly positive. Transformer manufacturers (OEMs) and end users like National Grid, Vattenfall, ESKOM and ConEdison have been quick to grasp the potential of applying MIDEI to tackle today's electricity transmission and distribution challenges.

"We've all come a long way since the 1970s when we patented MIDEI 7131 synthetic ester transformer fluid. MIDEI is accepted as a proven technology in this conservative and risk-averse industry", continues Barry Menzies. "Since then we've also introduced two natural ester fluids – MIDEI eN 1204 (based on rapeseed) and MIDEI eN 1215 (based on soybean). We're growing the uptake of this family of proven transformer fluids in the global marketplace."

Expanding the MIDEI footprint

M&I Materials (MIDEI's manufacturer) has significantly grown the MIDEI

MIDEI enables transformer OEMs and service companies across the globe to increase their value proposition and competitive advantage

brand to the point where it now has a growing global presence. With its headquarters in Manchester in the UK, M&I Materials manufactures internationally and has a growing number of offices, including in the United States, China, India, United Arab Emirates and, most recently, South Africa. The MIDEI team is also an integral part of the transformer and utility scene in Europe and the fast-growing Asia-Pacific region.

MIDEI enables innovation

It's now acknowledged that the specific performance characteristics of MIDEI can influence the future design and deployment of transformers worldwide. MIDEI is seeing more widespread use in standard specifications, including the latest 400 kV-range transformers. The connection is clear: MIDEI enables transformer OEMs and service companies across the globe to increase their value proposition and competitive advantage.

Cost and risk – the MIDEI solution

Taking into account the total transformer installation project cost, using MIDEI can help achieve major installation and ownership cost savings. For example, using MIDEI can reduce the required distances between the transformer and the surrounding buildings, enabling a smaller substation footprint. For utility or industry customers that must install transformers in urban areas where land is expensive, reducing the land required will provide significant savings. In addition, MIDEI's fire safe properties can reduce or eliminate the need for additional fire suppression systems. Where mineral

oil transformers can require bunding and containment to prevent leakage into the local drainage system, MIDEI, being biodegradable, can also reduce the need for this extensive infrastructure, offering even greater cost savings. The practice of retrofilling mineral oil transformers with MIDEI to take advantage of these benefits is also on the increase.

Risk mitigation is a core element of MIDEI's value. Over the years, using MIDEI has lowered risks where transformers are installed in residential areas, inside or close to buildings, hospitals, schools, protected environments and other sensitive locations. This is recognised by many insurance companies such that they regularly advise their clients to replace mineral oil with MIDEI, which can enable lower insurance premiums in return.

MIDEI looking ahead

Barry Menzies concludes "As the uptake of MIDEI natural and synthetic ester fluids accelerates worldwide, we're investing efforts in working closely with both OEMs and end users to support and develop their knowledge in specifying a cost effective, robust and proven alternative to traditional cast resin and mineral oil transformers. These are exciting times for MIDEI – we have a strong message to take to the market, a great family of ester fluids to present and a world of opportunity to explore."

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Risk mitigation, smaller substation footprint, installation and ownership cost savings are core elements of MIDEI's value