

Novel Solvency Booster for effective Mitigation of Varnish and Deposits

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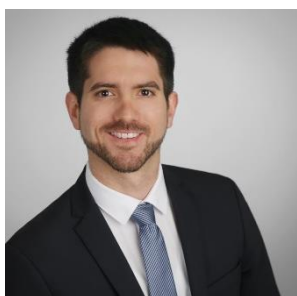
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Varnish and deposits present significant challenges in the operation and maintenance of industrial equipment, leading to reduced efficiency and increased downtime. These unwanted residues can cause various operational issues, including filter plugging, sticking of hydraulic valves, flow obstructions, and reductions in clearance. Additionally, they negatively impact heating and cooling performance, as well as contribute to increased friction and wear in lubrication systems. As industries increasingly trend towards extending Oil Drain Intervals (ODI), the need for effective strategies to mitigate varnish and deposits throughout these extended intervals has become a critical consideration for maintaining the efficiency and reliability of equipment over its operational lifespan.

This study investigates the beneficial role of dispersant additives in addressing these widespread issues within industrial equipment. Dispersant additives work by enhancing the solubility of insoluble particles, thereby preventing their agglomeration and subsequent formation of deposits. By incorporating these additives, we demonstrate a significant reduction in varnish and deposit buildup, particularly in high-temperature environments where these challenges are most pronounced. Our findings indicate not only a marked improvement in equipment performance but also enhancements in longevity and reliability. This research underscores the importance of utilizing advanced dispersant technologies as a proactive measure to optimize the operational efficiency of industrial systems, ultimately leading to reduced maintenance costs and improved overall productivity.

About the Author



Dr. David Eckes holds a master's degree in Chemistry and a PhD in Technical Chemistry from Technical University of Darmstadt, where he focused on polymer reaction engineering. With over eight years of experience at Evonik, Dr. Eckes has taken on various roles in the industry, beginning his career as a process engineer. He later served as the Business Manager for Southern Europe and a Global Key Account. Since 2024, he assumed the role of Global Technology Manager, focusing on specialty applications, among others, compressor oils.