

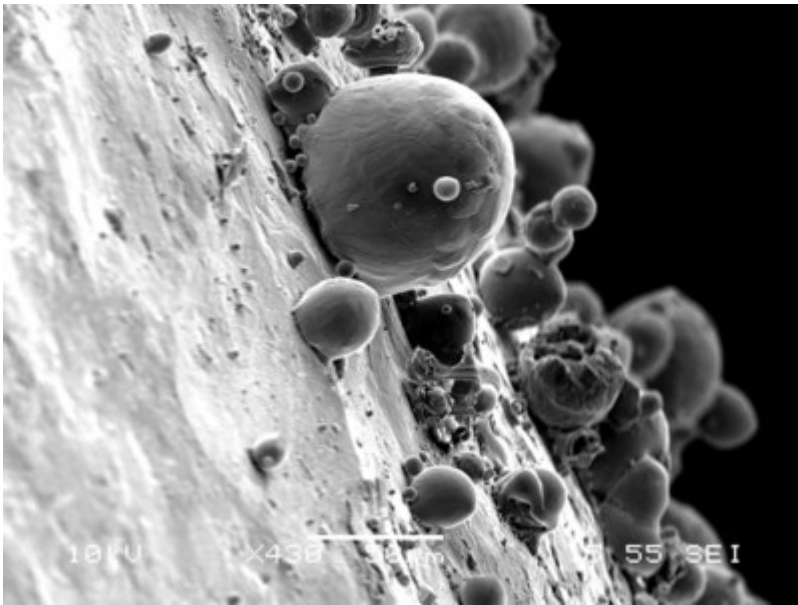


Novel Approach to Identify Tube & Pipe Corrosion Problems

August 11, 2015 at 10:00 AM EDT

Quaker Chemical utilizes analytical technology to detect corrosion from a microscopic perspective

CONSHOHOCKEN, Pa., Aug. 11, 2015 /PRNewswire/ -- **Corrosion protection** provided by metalworking fluids remains a top concern during the manufacturing of tubular goods. Since pipe products are vulnerable to multiple conditions that can lead to oxidation, corrosion can unknowingly occur in production or during storage. As a consequence, the pipe producer is at risk for significant financial losses in non-conforming products, scrap, and/or rework costs.



Challenged to investigate the sources of pipe corrosion, **Quaker Chemical Corporation** (NYSE: KWR, "Quaker"), the only "front to back" chemical specialty supplier to the Tube and Pipe industry, addressed the issue with Scanning Electron Microscope (SEM) and Energy Dispersive Spectroscopy (EDS) technology. Quaker's research efforts have resulted in a **methodology to pinpoint corrosion** through visual and chemical composition data.

Providing insight at a molecular level, the findings from the SEM/EDS give clues on how to rethink the manufacturing process and how to adjust the metalworking fluids to tackle rust prevention. The SEM imagery produces characteristic visuals which allude to corrosion stemming from causes such as trapped moisture, surface contamination, scale, humidity, or carbon levels. The EDS analysis, produced by x-radiation, generates a wavelength spectrum to indicate the present levels of chemical elements. Depending on the atomic and weight percentages, the corrosion trigger can be inferred and possibly resolved by a tweak in the process fluid properties to inhibit or eliminate the problems upstream.

Quaker's studies in SEM/EDS technology is a helpful tool in **understanding corrosion phenomena**. "When performed carefully and with proper interpretation of the results, advanced surface analyses with this tool can largely contribute to solving corrosion issues in tube and pipe operations," commented **Karl Kunkel, North American Industry Business Director – Metalworking**.

Visit <http://www.quakerchem.com/expert-experience/industry-expertise/tube-and-pipe/> for additional information and the full fluid solution offerings for Tube & Pipe applications.

About Quaker Chemical Corporation:

Quaker Chemical is a leading global provider of process fluids, chemical specialties, and technical expertise to a wide range of industries, including steel, aluminum, automotive, mining, aerospace, tube and pipe, cans, and others. For nearly 100 years, Quaker has helped customers around the world achieve production efficiency, improve product quality, and lower costs through a combination of innovative technology, process knowledge, and customized services. Headquartered in Conshohocken, Pennsylvania USA, Quaker serves businesses worldwide with a network of dedicated and experienced professionals whose mission is to make a difference. Visit quakerchem.com to learn more.



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SOURCE Quaker Chemical Corporation

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