

## SOLVING AND PREVENTING MICROBIAL SETBACKS

Full Coverage from Start to Finish, Tailored to Your System and Process

### Maintain System Integrity and Increase Your Confidence in Decision-Making Through One Easy Process

- Would you like to have a better understanding of what is actually causing the corrosion in your system?
- Are you concerned with the potential for reservoir souring?
- Have your operations been impacted by biofouling?
- Are you unsure of what next steps to take for mitigating or preventing microbial activity?

The negative impacts of unintended microbial activity can result in costly operational failures, decreased product quality, and unplanned system downtime. From pipelines to storage tanks to oil and gas reservoirs, microorganisms have been known to influence corrosion (MIC), clog up lines through biofilm formation, and cause petroleum souring through the production of H<sub>2</sub>S gas. The impact of these microorganisms is often overlooked or misrepresented because diagnosing their activity is a difficult challenge that relies on the right analytical tools and years of expertise. It requires piecing a puzzle together to see the bigger picture in the most efficient way possible.

That's why Microbial Corrosion Consulting, Skovhus BioConsult, and Microbial Insights have come together to provide a joint network of microbiological diagnostic services. As world-leading industry experts with over 90 years of combined experience, we are partnering as a *one-stop source* for your projects.

**By relying on a highly recognized international team of experts, all data is analyzed cohesively, the guess-work is removed, and asset risk is greatly diminished. We can help you with:**

- Historical data assessment
- Sampling design
- Recommended analyses
- Industry-leading molecular microbiological methods
- Data analysis
- Complete interpretation
- Comprehensive and accessible report writing
- Recommended next steps including mitigation and continued monitoring

**No matter where you are in the world, we've got you covered.**

Our experts have consulted on, and received samples from, systems all over the world. Please contact us today at [info@microbe.com](mailto:info@microbe.com) to setup an introductory discussion of your system needs.



**Microbial Insights, Inc. (MI)** is a laboratory with over 30 years of experience in molecular analysis. In 1998, MI became one of the first commercial laboratories to offer DNA-based technologies as a cost-effective approach to characterize microbial communities, and continues to be a world leader in molecular microbiological methods (MMMs) to this day. Microbial Insights' analytical offerings provide more comprehensive characterization of microbial communities and more accurate quantification of souring- and MIC-associated microorganisms, providing the crucial information needed to make informed decisions on microbial threats and mitigation. MI has received and analyzed samples from over 42 countries and all 7 continents and has experience extracting DNA from every possible sample matrix, including water, scrapings, coupons, swabs, pigging debris, and more.

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Richard Eckert, Principal Owner of **Microbial Corrosion Consulting, LLC**, has over 40 years of experience with oil and gas industry corrosion/failure investigations, internal corrosion assessment, mitigation and management; materials selection, forensic corrosion engineering, litigation support and regulatory compliance. He is the author of 4 books and over 50 publications on internal corrosion mitigation and monitoring, corrosion failure investigation and microbiologically influenced corrosion (MIC). Mr. Eckert is an AMPP certified Internal Corrosion Specialist, previously served on the NACE Board of Directors, and has chaired a number of technical committees that produced standards on corrosion management and internal MIC of pipelines.

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## **SKOVHUS BIOCONSULT**

Dr. Torben Lund Skovhus is Principal Owner of **Skovhus BioConsult (SBC)** and is also Docent & Project Manager at VIA University College in the Research Center for Built Environment, Energy, Water and Climate, Denmark. Dr Skovhus is currently chair of AMPP SC-22 and ISMOS TSC an organization he founded in 2006. He is the author of 100+ technical and scientific papers and book chapters related to industrial microbiology, applied biotechnology, corrosion management, oilfield microbiology, water treatment and safety, reservoir souring and biocorrosion. He is co-editor of "Failure Analysis of Microbiologically Influenced Corrosion" from 2021 (CRC Press).

