



BioTECHT

Capability Statement

Tailored Solutions to Microbiologically Influenced Corrosion Challenges



INNOVATIVE CORROSION MANAGEMENT
FOR A SUSTAINABLE FUTURE

BioTECHT specializes in Microbiologically Influenced Corrosion (MIC), Biofouling, Biodegradation and Biodeterioration.

Our MIC specialists are **INTERNATIONALLY RECOGNIZED EXPERTS** in the field with a combination of scientific and industry background and a **REMARKABLE TRACK RECORD OF DELIVERING MIC PROJECTS** to the resources sector.

The aim of our highly trained BioTECHT consultants is to deliver tailored, world-leading solutions to effectively manage MIC risk and protect valuable assets.

Industries

We provide our services to a wide range of industries, including:

 Oil & Gas

 Mining & Resources

 Defence

 Marine

 Water

 Chemical industry

Associations

BioTECHT is associated with the following industry bodies:

AMPP Association for Materials Protection and Performance

ACA Australasian Corrosion Association

ASM Australian Society of Microbiology

BioTECHT Services

The BioTECHT division at TECHT provides the following services:

✔ Education & Training

Tailored, in-house and hands-on training to asset owners to be able to better understand and manage MIC. Trainees are introduced to fundamental aspects of MIC, MIC on different materials and in different environments and equipped to select the best monitoring and mitigations programs to protect their assets. Most importantly, the programs are tailored to the specific needs of the asset owner with relevant case studies and practical examples to gain clarity and confidence in managing MIC threats.

✔ Asset Baseline Assessment

Baseline Assessment is an unbiased, independent and robust assessment of MIC risk. This service includes comprehensive testing to reveal the microbial make-up of your assets via surface, solid and water samples, combining insights from both traditional and state-of-the-art methods. Equipment design features, historical data, environmental and operational parameters are assessed to generate a heat map of the system and deliver holistic and practical advice.

The aim is to identify MIC related issues, quantify the risk to the operation, advise best practice, tailored monitoring and remedial options in a prioritised report with estimated costs and budgeting guidance.

✔ Failure Investigations

A systematic approach involving interdisciplinary science that includes microbiology, chemistry, metallurgy, and corrosion.

✔ Expert Advice and Independent Third-party Assessment

- Expertise in the development of fit-for-purpose solutions to address MIC issues and support timely, informed maintenance decisions.
- QA/QC independent third-party validation and verification of MIC management frameworks, procedures and practices. Unbiased, independent performance check.

✔ Customized MIC Monitoring

At TECHT, we understand that all assets are different, and therefore, we seek to create tailored, cost-effective monitoring programs that deliver meaningful data and practical solutions.

Our services include:

- Routine MIC monitoring including sample collection, testing, data analysis, interpretation and guidance on MIC management, optimization and improvement.
- Specific detection and monitoring of problematic microorganisms, which may include iron and manganese bacteria, methanogens, acid-producing bacteria, and sulphate-reducing bacteria.
- Design and implementation of microbial monitoring systems for early detection of biofilm formation and MIC.
- Corrosion coupon analysis (in accordance with AMPP SP0775-2013 and AMPP TM0212-2018).

✔ Custom Laboratory Simulations

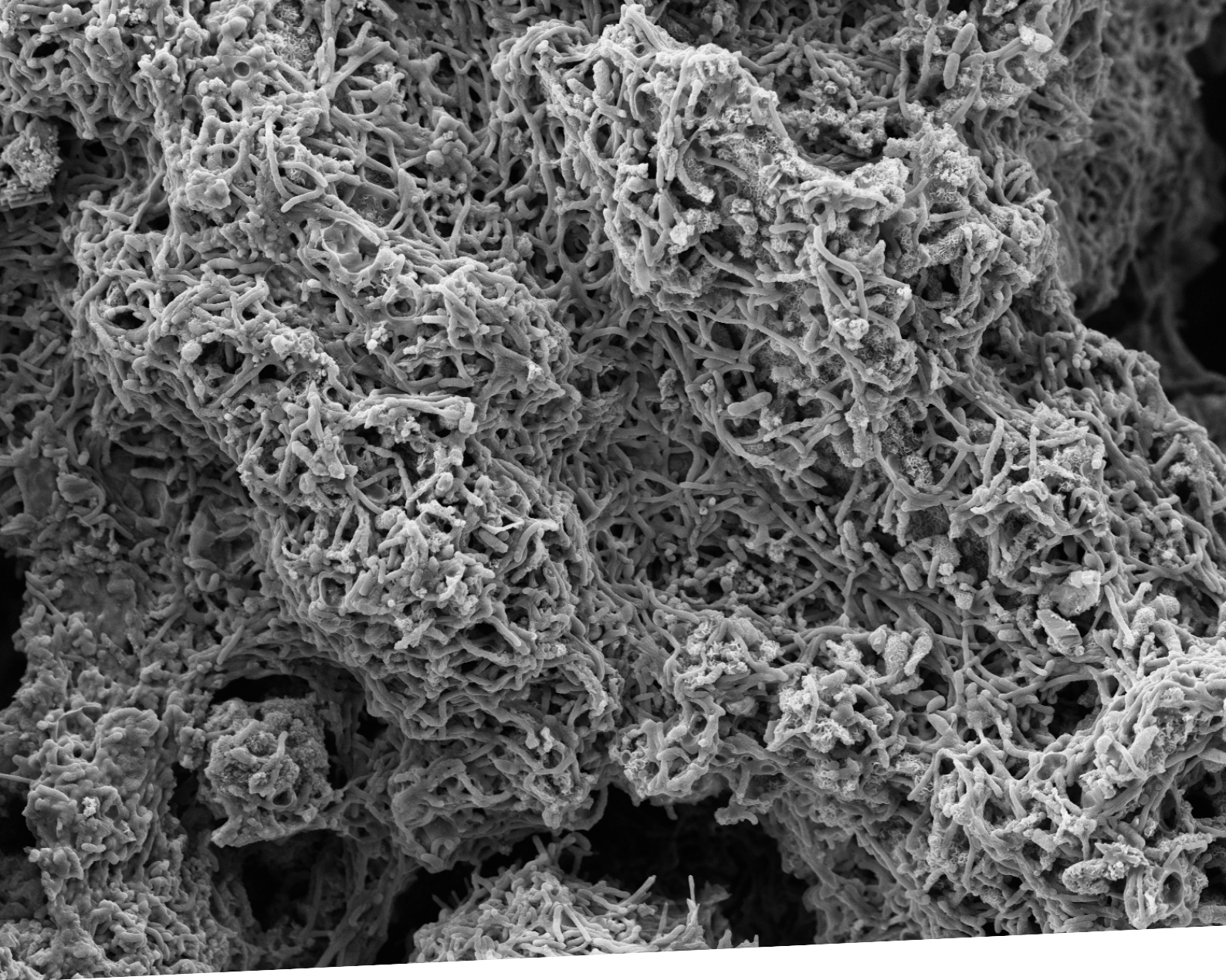
- Custom laboratory simulations based on specific industry requirements.
- Investigation of MIC and biodeterioration rates and mechanisms in the following substrata:
 - Concrete/cement mortar lining
 - Steels
 - Coatings
 - Deposits and scales

✔ Targeting Biofilms

Biofilms are recognised as a global issue impacting health, food, water, marine and industrial sectors. Biofilm formation is the critical step in MIC.

At TECHT we are specialists in biofilms. We offer the following services:

- Customised biofilm tests for validation, verification and optimization of chemical biocides, anti-microbial and antifouling products at various real-world scenarios.
- Biofilm characterisation including sample collection, preservation, high-resolution imaging, bio-chemical characterisation and species identification.



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