North East Corrosion Engineers Ltd.

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A Specialist Approach to Integrity

Oilfield Microbiology

Microbiological fouling in oil and gas production systems can result in significant financial loss and plant down-time if not monitored and remediated efficiently. Proliferation of Sulphate Reducing Bacteria (SRB) and other sulphate reducing archaea (SRA) can cause Microbially Influenced Corrosion (MIC) in pipelines and production vessels, or reservoir souring and clogging of pore spaces.

NECE provide a fully comprehensive microbiological monitoring package which combines sessile swabbing of intrusive devices with planktonic microbiological fluid sampling to assess the extent bacterial populations in all systems at risk.

Scope:

- Design and implementation of customised MIC mitigation strategy and procedures.
- Microbiological audit of oil and gas process systems (production, drains, water injection, etc).
- Bacterial analysis of utility systems (diesel, firewater, cargo tanks, cooling medium etc).
- Planktonic and sessile analysis with culture based microbiology methods.
- Molecular microbiology analysis (qPCR, FISH, DAPI).
- Assessment and mitigation of bio-fouling and souring.
- Dissolved oxygen surveys (Orbisphere certified).
- Sidestream commissioning and routine monitoring program.
- Evaluation of biocide efficacy and defining treatment regimes.
- Data correlation and interpretation (pitting rate / coupon morphology, etc).
- Management of deadleg / bridle pipework.
- Technical support and comprehensive reporting.
- MIC failure investigation and analysis.
- Consumables and media supply.