

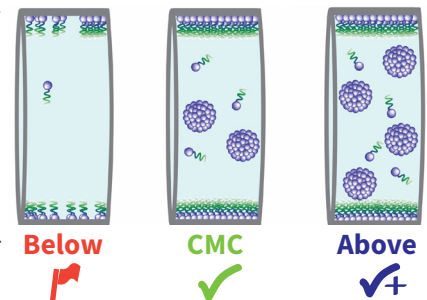
CASE STUDY

CoMic™ – Identifying Opportunities for Corrosion Inhibitor Optimisation

BACKGROUND An onshore US Midstream Pipeline Company wanted to review their corrosion management system across a pipeline spanning three states. The client believed there may be opportunities to save cost by reducing chemical spend, but wanted to make sure the pipeline was fully protected. The client chose LUX Assure’s CoMic™ product to fulfil this need and supplement their existing data set, as CoMic™ can provide information on both the under and over dosing of corrosion inhibitors.

CoMic™ assesses whether or not a field sample is above, below or at the Critical Micelle Concentration (CMC), the concentration at which micelles begin to form. This concentration has been independently described as optimal, as it represents maximum protection, whilst avoiding an excess of inhibitor.

CoMic™ is unique as it consists of a quick and simple test, which compares the clients’ corrosion inhibitor availability under current pipeline conditions with this functional level of corrosion inhibitor.

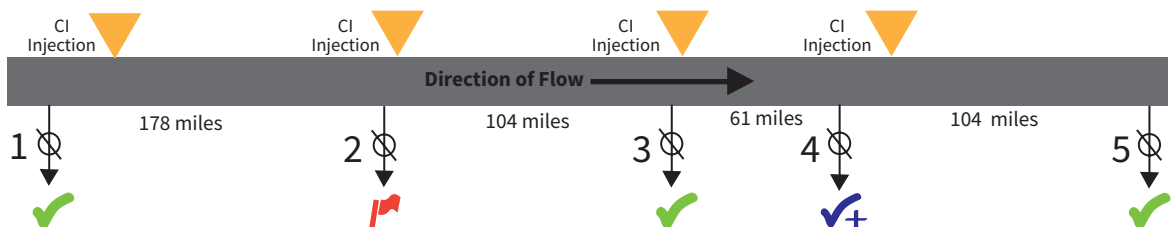

RESULTS

The client tested five points along a 500-mile section of pipe and results are shown below. The testing demonstrated that samples were around the CMC at three points, indicating optimal dose was being achieved (green tick).

The second sample point, the furthest distance from a chemical injection point, showed no micelles. This signalled that further testing at the site was required as it indicates a potential corrosion risk exists at this point (red flag).

The fourth point indicated an excess of micelles, highlighting that this area may be over-dosed and there is an opportunity for cost-saving through dose reduction (blue tick).

SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5
Micelles Detected. Regular Monitoring Recommended.	No Micelles Detected. Dose Optimisation Recommended.	Micelles Detected. Regular Monitoring Recommended.	Micelles Detected in Large Numbers. Dose Optimisation Through Dose Reduction Recommended.	Micelles Detected. Regular Monitoring Recommended.


SUMMARY

CoMic™ identified an area of potential corrosion risk and an area of over-dosing, providing the client with data to enable them to fully optimise their corrosion inhibitor for the field conditions. Following this, the client looked to build regular CoMic™ testing in to their management system to ensure the system remained optimised over the long-term and to respond to system changes.



A game changing service to help achieve optimal usage of corrosion inhibitor

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