

CASE STUDY

CoMic™ – Increasing Asset Integrity Assurance at Onshore UK Facility



BACKGROUND A UK onshore crude oil processing facility required assistance to ensure their facilities were protected from the effects of corrosion.

Currently the facility is using film forming corrosion inhibitors to protect high value critical infrastructure.

Optimum inhibitor dosage levels are difficult to establish. While under-dosing can increase the risk of corrosion, over-dosing of inhibitor can cause emulsion build-up and complex separation issues which are time-consuming and expensive to resolve.

LUX Assure’s CoMic™ methodology was utilised to ensure the corrosion inhibitor in use was being adequately dosed. The CoMic™ method works by detecting the presence of corrosion inhibitor micelles, a key feature which determines optimal dose rate. It is the only readily available technology for accurately measuring Critical Micelle Concentration (CMC) in the field.

TESTING

Prior to deployment, LUX Assure’s scientists performed a series of tests in order to simulate field conditions at the processing plant. This allowed a picture of the corrosion inhibitor micelle behaviour to be established.

Once at site a number of locations were selected, from which suitable water samples could be collected. The results showed that all sites were just above the CMC, indicating that adequate corrosion inhibitor was being dosed throughout the system. In addition, these results were combined with the operators in-house LC-MS method which provided support to the results determined by the CoMic™ method.

SUMMARY

Through use of the CoMic™ methodology the operator was able to gain assurance of the optimal dose of corrosion inhibitor across the facility.

Valuable results provided by CoMic™ allow for informed decisions to be made as field conditions change, increasing confidence in corrosion inhibitor dose selection.

CoMic™ ultimately helped increase asset integrity assurance and maintain productivity.

PROBLEM	SOLUTION	RESULT
Method to determine optimal dose of corrosion inhibitor for protection of high value infrastructure required	LUX Assure’s CoMic™ technology, a unique in-field service	CoMic™ helped increase asset integrity assurance through determining the optimal dose



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

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