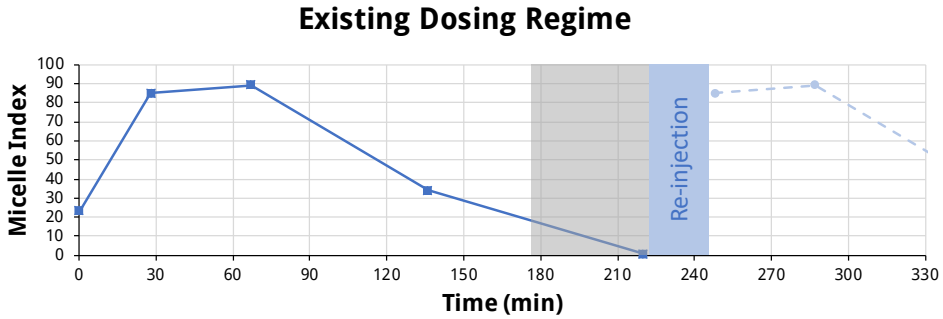
CASE STUDY

CoMic™ – Dosage Optimisation in the Field

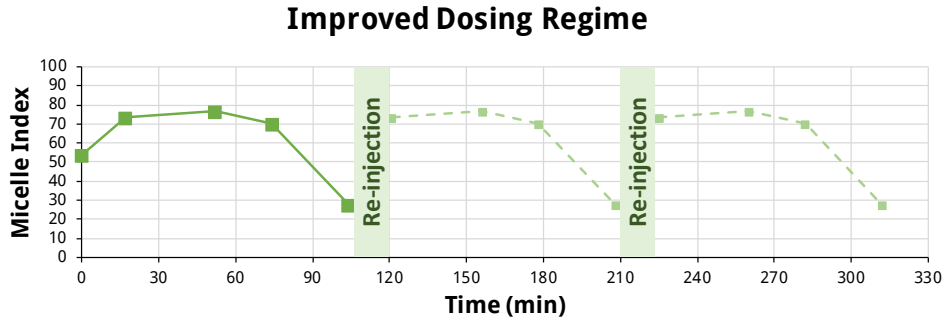
BACKGROUND An onshore European asset was using an oil soluble corrosion inhibitor to protect the system. This chemical was substituted for a water soluble inhibitor but over the following months concerns were raised about potential corrosion issues. The inhibitor is batch dosed and the Operator wanted to investigate whether the system contained sufficient chemical to protect the system between each dose.

CoMic™ was chosen because of the valuable information it offers on the availability of corrosion inhibitor in a system and because testing could be performed on-site, results could be interpreted in near real-time and used to inform further system management.

TESTING CoMic™ was employed to measure the micelle content of samples to determine inhibitor levels between injections. The existing dosing regime was tested first. The results showed that the corrosion inhibitor levels dropped significantly (no micelles were detected) before the next injection cycle began. This indicated that during this time, there was an opportunity to better protect the system.



The Operator, then trialled alternative injection regimes, including altering pump capacity, injection duration and time between injections, in order to identify a regime where micelles were consistently observed throughout the injection cycle.



Testing of the final regime with CoMic™ confirmed that micelles were detected during all time points in the injection cycle. This indicated that the new regime offered good availability of inhibitor to provide optimal corrosion protection.

SUMMARY CoMic™ provides an indication of inhibitor availability. In this field deployment, changes in the system were rapidly detected, making it the ideal tool for on-site chemical optimisation. CoMic™ was used to establish a baseline for existing dose rates, and demonstrate the response to dosage changes. This produced a tailored recommendation based on field conditions, and gave confidence that the system's chemical management was optimal.

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