

Case Study

SUPPLY CHALLENGES WITH CORROSION INHIBITORS

AIE-CS-24-006



Client: Chemical Supplier
Industry: Oil & Gas
Region: East Asia
AIE Solution: Corrosion Management Strategies, Asset Performance Management

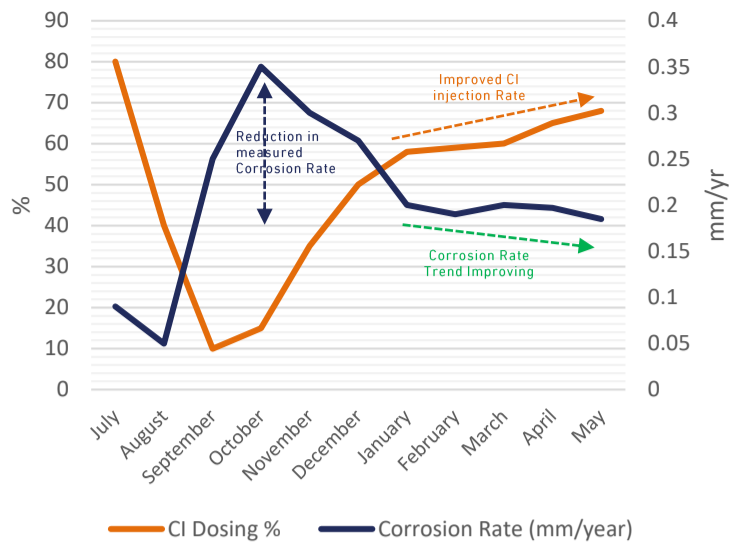


Figure 1: Corrosion Inhibitor Performance

CHALLENGE

AIE was contacted by a chemical supplier who was unable to maintain normal Corrosion Inhibitor (CI) supply to one of our clients due to a CI shortage that had persisted for approximately 12 months. This shortage posed a significant risk of internal corrosion within the client's process trains, threatening operational efficiency and asset integrity.

SOLUTION

To address the CI supply challenges and minimize internal corrosion risk, AIE implemented a strategic approach using Veracity CCM software. This software was instrumental in accommodating all relevant CI data and performing data correlations to draw conclusions and make recommendations. A temporary corrosion inhibitor injection strategy was devised and implemented to mitigate internal corrosion risks in critical process systems while the chemical supply issues persisted.

The strategy focused on optimizing the use of available corrosion inhibitors by targeting areas with the highest risk of corrosion. A critical review of CI dose rate requirements was conducted, and inhibitor lab testing was carried out to assess performance and identify opportunities for dose rate optimization. The software facilitated monitoring of inhibitor effectiveness during this temporary period to ensure adequate protection despite the supply challenges.

OUTCOME

- Internal corrosion risk was reduced by 45% through the strategic deployment and optimization of corrosion inhibitors, safeguarding the integrity and reliability of critical process systems.
- Despite CI supply challenges, operational efficiency increased significantly. This improvement was achieved by effectively managing CI dosage rates and mitigating the impact of supply fluctuations on corrosion control.
- By minimizing dips in CI performance and reducing the need for additional maintenance measures to address corrosion issues, the client realized substantial cost savings. Approximately \$13,000,000 in potential maintenance costs were avoided due to proactive corrosion management strategies.

VALUE REALISED



Effective corrosion control during the CI supply shortage ensured critical process systems remained reliable and operational.



Optimized corrosion control strategies saved significant costs by preventing expensive maintenance and operational disruptions due to corrosion issues.



Using Veracity CCM software enabled proactive management of corrosion risks with data-driven insights despite supply challenges.