

Case study: Gulf of Mexico, United States

SENTRYNET remote tank monitoring solution saved operator \$1.7 million USD annually

Corrosion failure caused a major operator in the Gulf of Mexico to shut in an offshore production pipeline. An investigation of the failure found that, while the operator was using a chemical corrosion inhibition program, there was no definitive way to confirm the treatment was effective, or even if the pumping systems were operating. Manually monitoring the volume of chemical being injected on remote, unmanned platforms proved to be challenging.

In the short term, the operator added seven chemical injection skids to the existing systems to protect against additional corrosion. Adding the injection points cost more than \$127,000 USD monthly, and increased chemical consumption by more than 7,000 gal (26,497 L). In the long term, the operator wanted a permanent solution that was cost-effective, simple, and would help prevent future failures.

Reliable chemical control

Baker Hughes recommended the **SENTRYNET™ remote tank monitoring solution**. The system would alert the operator's staff to over or under-treatment events, verify the chemicals were being injected and help manage the chemical inventory. The SENTRYNET technology transmits chemical tank

data via satellite communications to a secure, web-based, Baker Hughes data platform. The service compares the onsite data to target injection rates and can send an alarm when out-of-parameter situations occur. This prompts the operators to respond and correct the problem.

The operator installed SENTRYNET remote tank monitors at 19 corrosion injection sites. The Baker Hughes team worked to install the correct tank monitor sensor technology, and to ensure accurate data was being collected and aggregated at all the locations.

The SENTRYNET solution verified chemical injection rates and usage, provided the operator with custom web viewing and reporting, and monitored the status of available chemical inventories. The solution also helped the operator streamline the chemicals provision process.

Removal of the old injection systems saved more than \$1.7 million USD annually. In addition, the operator recommended the SENTRYNET tank monitoring solution across their entire operations.

Challenges

- Offshore production pipeline shut down due to corrosion with associated production, manpower and maintenance costs
- Additional HSE risks due to corrosion failure
- Customer could not verify treatment of existing corrosion control program
- A permanent, cost-effective chemical monitoring system required

Results

- Saved an estimated \$1.7 million USD annually
- Verified corrosion inhibition treatment and mitigated corrosion problems
- Reduced HSE and environmental risk
- Optimized chemical expenses
- Streamlined chemical inventory management and provision