

## Process Efficiency Improvement



Maximizing profits while maintaining process efficiency, reliability, and low environmental impact is every plant's most critical and challenging dilemma. In order to improve profitability and stay competitive, plants in every industrial sector must increase throughput, reduce downtime and cut costs where possible. This can lead to significant strain on processes, and finding the right conditions to run a plant both efficiently and profitably can be extremely difficult.

We believe every plant can operate with improved profitability without neglect to equipment reliability, product quality or environmental impact. Nexo Solutions offers a number of unique and cost-effective solutions to facilitate improvements and enhance profits, including:

- Contamination Control
- Operational Improvements
- Product Recovery
- Debottlenecking & Capacity Increase
- Yield Improvements & Loss Elimination
- Maintenance & Downtime Reduction

### Case Study

A heater treater at an oil field operation was experiencing challenges with crude oil dehydration. The crude oil effluent from the treater was not meeting specifications for BS&W, dramatically reducing the crude's value. The effluent water was also heavily contaminated with hydrocarbon, causing downstream processing issues in addition to lost product. In order to identify the reason for inefficient phase separation at the treater, Nexo Solutions conducted a root-cause technical evaluation of the process.

### Problem

The evaluation revealed significant amounts of organics and suspended solids in the feed water to the treater contributing to emulsion tendency. Operational inefficiencies including temperature, pressure and residence time in the vessel were also identified.

### Solution

Nexo Solutions implemented a number of changes to the system. The temperature, pressure, water injection rate and residence time were all modified. A more suitable emulsion breaking additive was also implemented. Finally, a feed water filtration system was implemented to remove suspended solids from the system. The result was clean effluent water with no hydrocarbons and crude oil meeting BS&W specifications.



For additional information, please contact us at [Support@NexoSolutions.com](mailto:Support@NexoSolutions.com)