

Downstream Chemicals
Water and Process Treatment

Refining capabilities

Increase profitability with proven water and process chemical treatment programs

Overview

Halliburton has a rich history of delivering results to refineries of all sizes. Whether within the United States or globally, our team has successfully assisted refiners in addressing water and process treatment challenges. Currently, we manage some of the most intricate water systems in the United States, including wastewater treatment.

Our Services

Our services prioritize equipment reliability, plant optimization, and cost-effective solutions. We initiate this process with a comprehensive assessment that considers mechanical, operational, and chemical factors. On the process side, our extensive experience includes treating diluted bitumen, conventional crude, tight oil crude, and heavy oil blends. Notably, we handle some of the world's most demanding crudes from Venezuela and Canada.

Our Approach

We begin by conducting system audits and analyses, which involve evaluating water and refinery process streams. Skilled on-site service specialists, field engineers, and subject matter experts assess the necessary mechanical, operational, and chemical adjustments to enhance production and equipment reliability.



Water Treatment

- Influent water clarification and filtration
- Boiler water treatment
- Steam/condensate treatment
- Cooling water treatment
- Waste water treatment
- Equipment failure analysis by x-ray fluorescence (XRF) and scanning electron microscope (SEM)
- Detailed wet chemistry analysis by ion chromatography (IC) and inductively coupled plasma (ICP)
- Boiler water pretreatment including demineralizers, reverse osmosis, softeners
- Equipment performance monitoring/efficiency evaluations
- Equipment reliability monitoring and improvement
- Energy conservations and efficiency improvement programs
- Process leak detection monitoring

Process Treatment

- Advanced crude overhead computer modeling
- Complete finished fuel additive product line
- Crude and hydrodesulphurization (HDS) preheat exchanger antifoulants
- Crude characterization, compatibility, and fouling rig studies
- Crude and coker furnace treatment and monitoring
- Desalter and crude tankage emulsion breakers
- Desalter salt balance and hydrolysis calculations
- Heat exchanger monitoring and optimization
- High-temperature naphthenic acid inhibitors
- Industry benchmarking and system capabilities analysis
- Low salt deposition, custom-blended neutralizing amines
- Real-time corrosion monitoring and data collection
- Slop treatment and solids management
- Unique low pH crude overhead filming amine technology

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.

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