

Refining Capabilities

INCREASE PROFITABILITY WITH PROVEN WATER AND PROCESS CHEMICAL TREATMENT PROGRAMS

OVERVIEW

Athlon, a Halliburton Service, has a long history of delivering results to refineries of all sizes. Whether it is in the United States or around the world, our team has successfully helped refiners with their water and process treating challenges. We currently treat some of the most complex water systems in the United States, including wastewater.

Our services ensure equipment reliability, plant optimization, and a low (or no) capital cost solution, which starts with a mechanical, operational, and chemical assessment. On the process side, we have extensive and successful experience treating diluted bitumen, conventional crude, tight oil crude, and heavy oil blends, including some of the world's most challenging crudes from Venezuela and Canada.

OUR APPROACH

We start by conducting systems audits and analyses, which include analyzing water and refinery process streams. This system assessment is performed by skilled on-site service specialists, field engineers, and subject matter experts, who evaluate what mechanical, operational, and chemical changes are needed to improve your 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

For more information, contact your local Halliburton representative
or visit us on the web at www.athlonsolutions.com

Sales of Halliburton products and services will be in accord solely with the terms and conditions
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