

## Oil & Refining / Petrochemical Instrumentation

**Enabling real-time process control for better environmental sustainability, product quality, and company profitability**



From monitoring raw-material input lines, to process optimization during the many refining steps, to environmental compliance monitoring and reporting – Galvanic systems deliver the utmost in ease-of-operation, precise measurements, consistent, field-proven performance and value

Derived from the various hydrocarbons extracted from crude oil and natural gas, petrochemicals are the end product themselves or a primary source material in the manufacture of virtually everything not made from rocks, metal, plants or other living things – from fuels to pharmaceuticals, industrial solvents to food containers, carpets to cosmetics. According to the [American Fuel & Petrochemical Manufacturers association](#), the petrochemical industry supports about 1.4 million American jobs. Transforming crude oil and natural gas into the plethora of products we use thousands of times every day involves breaking them down into their derivatives – benzenes, propylenes, methanes, butanes, butylenes, butadienes, ethylenes, toluenes, and xylenes – an increasingly complex series of refining steps, depending on the final product. Process control and optimization facilitated by precise, real-time measurements is key to maximizing productivity and lower costs, while meeting quality specifications and contractual obligations, and complying with the numerous health, environmental, and safety regulations to which the industry is subject.

### Selected Applications

- 40 CFR 60 Subpart Ja flare gas emissions monitoring
- Acidity of hydrocarbon samples
- Amine analysis – concentration, sulfide gas loading, total acid gas loading
- Asphalt process
- Biodiesel process
- Boiler waters
- Brine purification
- Catalyst detection & recharge
- Catalyst detection & recharge
- Catalyst protection
- Claus process
- Color of fuel
- Feedstock/fuel gas monitoring
- Hydrocarbon in water (unsaturated HC only)
- Stack emissions
- Sulfur recovery – H<sub>2</sub>S in acid gas feed
- Sulfur recovery – H<sub>2</sub>S/SO<sub>2</sub> in sulfur pit headspace
- Sulfur recovery – H<sub>2</sub>S/SO<sub>2</sub> ratio - air demand
- Sulfur recovery – SO<sub>2</sub> in stack
- Total sulfur in fuels as mercaptans
- Wastewater – UV-254 nm measurement for unsaturated hydrocarbons
- Oil in water

**AccuChrome GC**  
Btu & Hydrocarbon Analyzer



**ProTech903**  
Tape-Based H<sub>2</sub>S / Total Sulfur Analyzers



**Brimstone**  
Sulfur-Recovery Analyzers



**Monitek**  
Turbidity, Suspended Solids & Color Monitors



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