

Optimise your alkylation process and take control with the Tracerco Profiler™

Optimise your alkylation process, hydrocarbon, emulsion and acid levels and improve safety with the Tracerco Profiler™.

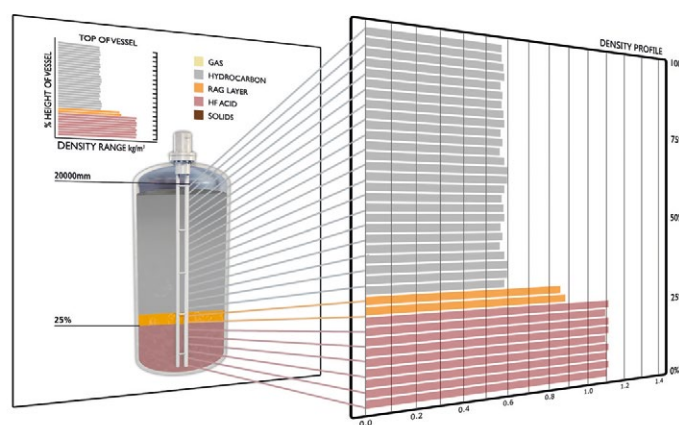
The Challenge

Alkylation processes present some of the more challenging applications for interface measurement and control in refinery operations. It is important for the operator to have confidence in the process to optimise alkylate production, while ensuring safe operation and environmental compliance.

In a settler, not knowing the levels of hydrocarbon, emulsion and alkylate with confidence can cause problems, including increased polymer formation and combined fluorides, as well as reduced alkylate production. Without knowing how much acid there is in the system, it cannot be determined how much is lost via depropaniser overhead, flaring sources and acid regenerator bottoms. Being able to see acid content can enable operators to establish if there is an acid loss problem, and help troubleshoot the source.

Poor interface and level control creates the need for operators to manually monitor the levels, and increases the probability of exposure to acid and leaks from manually operated try-cock valves. In addition to safety, there are process and environmental issues, such as carry-over and carry-under. Acid carry-over from the settler with hydrocarbons increases downstream failures such as corrosion in the depropaniser inlet, increased load on downstream acid recovery processes, increased

acid consumption, and increased neutralisation caustic/potassium hydroxide consumption. Carry-under of hydrocarbons to the settler impacts I/O ratio and chemistry, leading to disrupted conditions and suboptimal yields.



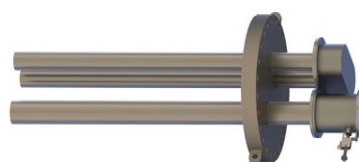
The Solution

The Tracerco Profiler™ allows visualisation of interface levels and densities inside the vessel. With this information, the asset can benefit from real-time monitoring of hydrocarbon, emulsion and acid to high degrees of accuracy.

The Benefits

- Contributes to stable operations and optimal yields by improved process control
- Reduces the risk of operator exposure to acid
- Reduces the number of manually operated valves and leak points
- Reduces corrosion risk in downstream equipment (depropaniser, acid recovery and acid neutralisation)
- Reduces operating costs in energy for acid recovery, acid, caustic/KOH
- Improves circulating acid target

With a custom design and no moving parts, the Tracerco Profiler™ provides a maintenance-free process control solution for aggressive process environments.



Our innovative work gives customers the insights they need to help solve their problems. Read more of our case studies at tracerco.com/downloads/case-studies

The Tracerco Profiler™ specification

Performance	Compliance
Detection range: Application dependent Accuracy: ±1% range (typical) Repeatability: ±0.5% (typical)	EMC: Complies with directive 2014/30/EU, EN61326-1:2013
Environmental	Technology
Operating temperature: -40°C to +85°C (-22°F to +122°F) Storage temperature: -40°C to +85°C (-40°F to +140°F) Ingress protection rating: IP66	Segmented Geiger-Müller tubes
Output	
Modbus TCP/IP, Modbus RTU, 4-20mA	
Mechanical	Electrical
Diameter: Application dependent Material: Application dependent	24Vdc @ 75mA 2-core twisted-pair cable. Max. cable length 1000m with 16/0.2mm cores (0.5mm²)
Certification	
ATEX	II 1G Ex ia IIC T4 Ga (-55°C ≤ Tamb ≤ +85°C)
IECEX	Ex ia IIC T4 Ga (-55°C ≤ Tamb ≤ +85°C)
CSA	Ex ia IIC T4 (-55°C ≤ Tamb ≤ +85°C)
FM	I / 0 / AEx ia / IIC T4 (-40°C ≤ Tamb ≤ +85°C) IS / I / 1 / ABCD / T4 (-40°C ≤ Tamb ≤ +85°C)
Output	
T218	Tracerco Toolbox