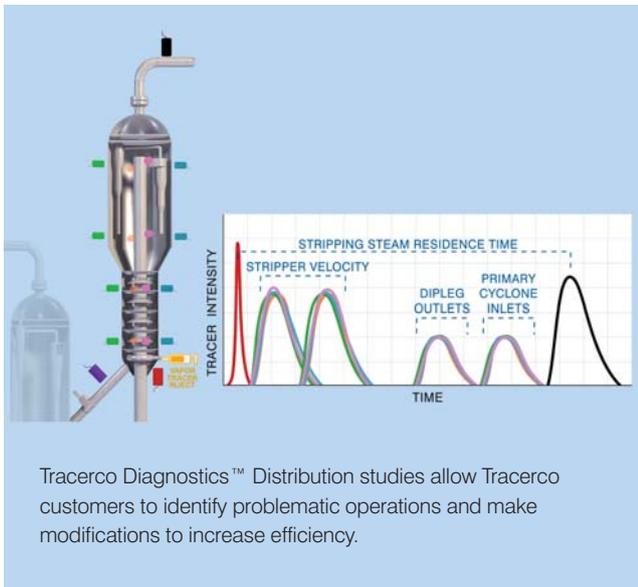


# FCC Stripper - Distribution Studies

## A Tracerco Diagnostics™ Distribution study can be performed to identify catalyst and vapour distribution in the stripper.

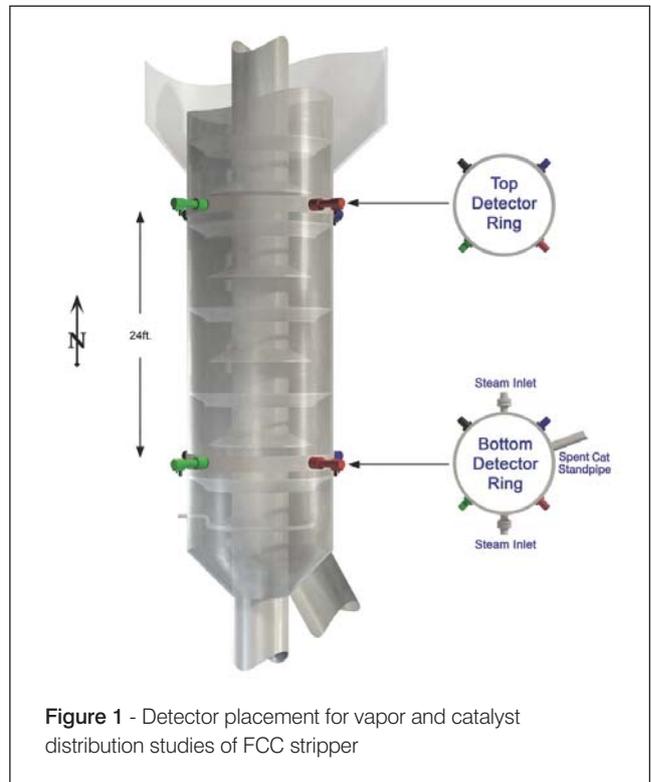
Uniform distribution of catalyst and steam in the stripper is critical to achieve high stripping efficiency (less carry-down of the hydrocarbon products from reactor to regenerator). A failure to effectively remove the hydrocarbon from the catalyst will result in a loss of product, loss of throughput, and lowered catalyst activity due to increased regenerator bed temperature.



## Project Field Test

Tracerco was contacted to conduct distribution studies for a leading refiner that was experiencing issues on their FCC stripper.

Identifying maldistribution can be accurately characterised using tracer injections with detectors positioned in the pattern shown in Figure 1. Separate injections are made of a gas tracer into the stripping steam and a catalyst tracer into the riser.



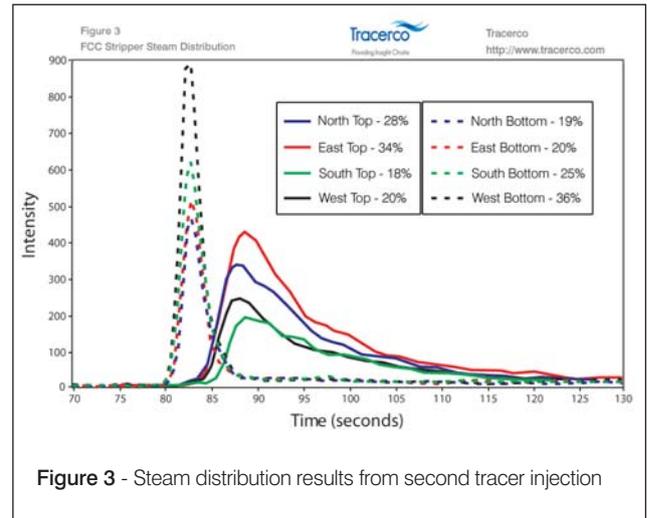
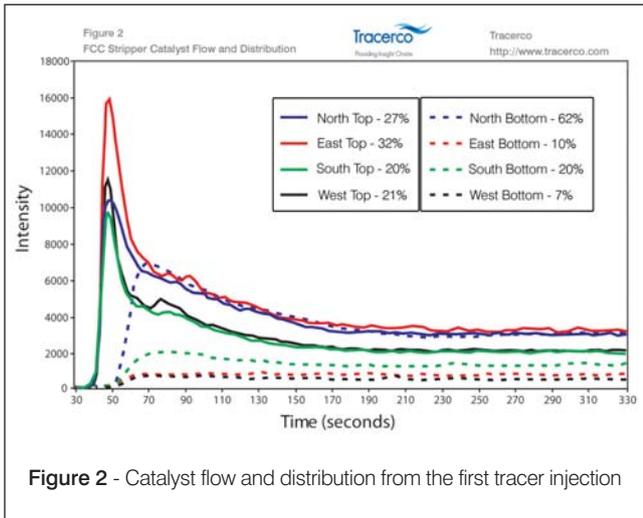
## Project Analysis

Figures 2 and 3 show vapour and catalyst distribution in the stripper of one FCC. Results from the stripper distribution study show 62% of the catalyst to be passing through the North quadrant at the bottom of the stripper and only 19% of the steam passing through the same area. This imbalance of steam to catalyst ratio in the North quadrant resulted in inadequate stripping of the hydrocarbons from the catalyst. A good explanation of why the regen temperatures were too high.

## Customer Conclusion

Proper FCC stripper operation is important for the recovery of as much hydrocarbon as possible. The Tracerco Diagnostics™ Distribution results can aid Tracerco customers to identify problematic operations and make modifications to increase efficiency.

The study can also identify problem areas for upcoming turnarounds to assist in scheduling maintenance, resulting in an on-time turnaround performance.



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