



BETTER DATA TURNS CAPITAL SPEND INTO MAINTENANCE

FIELD-VALIDATED LEAK SURVEY RECOVERED 9,000 CFM AND REMOVED THE NEED FOR RENTAL COMPRESSORS OR NEW EQUIPMENT

SITE-WIDE AIR LEAK SURVEY REVEALED THE REFINERY DIDN'T HAVE A CAPACITY PROBLEM BUT INSTEAD A LEAK PROBLEM.

A large US refinery's single, integrated instrument air network had outgrown its compressor capacity over several years, with no clear cause identified. To sustain pressure across the site, the facility had turned to multiple rental compressors, spending thousands per week just to keep air flow reliable. As rental costs mounted, the site engaged Hydrus Works to evaluate new compressors, determine placement, and build an implementation plan.

CHALLENGE

The refinery's compressed air system was under chronic strain, and staff couldn't pinpoint why demand had outpaced capacity. The default path forward was new capital equipment — additional compressors sized to close the gap.

SOLUTION

Before recommending new equipment, Hydrus Works conducted a comprehensive system evaluation, including a site-wide compressed air leak survey to ensure any capital investment would be sized correctly.

The survey uncovered a finding that changed the scope of the project entirely: over 30% of the site's compressed air was being lost to leaks. Data showed that fixing 65% of identified leaks would not only eliminate the need for rental compressors, but also let the site shut down one existing compressor and hold it in reserve as a spare.

Hydrus Works pivoted the project from equipment procurement to a targeted leak-repair program that fit inside the site's existing maintenance budget.

RESULTS

The leak survey turned a planned capital project into a maintenance-budget fix — with capacity to spare.

- Identified 1,726 total air leaks across the site
- Quantified 13,424 CFM in total air loss
- Estimated \$688,300 in annual cost from air leaks
- Recovered 9,000 CFM through targeted leak repairs
- Eliminated all rental compressors without purchasing new equipment
- Reduced energy consumption from compressor operation and air dryer load

Field-validated leak survey data eliminated the need for new compressor capital, removed all rental compressors, and delivered a spare unit and lower energy costs — all within the site's existing maintenance budget.