

[BUSINESS UPDATE]

# AltairStrickland provides quick FCCU turnaround for Valero

*AltairStrickland*

We often talk about the importance of planning in turnarounds but it is the nature of a turnaround to harbor surprises. That's where trained and experienced specialists like AltairStrickland can overcome obstacles, preserve quality, perform safely and still finish ahead of schedule. Such was the case at Valero's Wilmington, Calif., refinery.

**The job**

The major portion of the job scope was the planning, management and execution necessary to replace an FCCU reactor. Associated work included the expansion joints, the third stage separator, all cat lines, the main air blower (MAB)/expander and the regenerator. Disciplines included engineering, rigging studies and the selection of major cranes for the reactor lifts. Safely lifting a 255,000-ton reactor is no small venture! To assure success, AltairStrickland uses 3D modeling software to carefully choreograph each lift and to select a crane that not only has the lift capacity needed, but also has the right footprint. Many refineries have extremely narrow pathways and overhead clearances that make crane selection an art unto itself!

**Reacting to surprises**

Replacing the reactor was most certainly going to be a challenge, but the most surprising challenge proved to be inside the regenerator. After taking a look inside the regenerator everyone realized it would take more work than first expected. The original plan was to replace one of the cyclone dustbowls down to the trickle valves while simultaneously changing out the air distributor dome in the lower regenerator. Meanwhile, weld repairs were to be made in the upper regenerator. Upon inspection, the regenerator showed that it had

other plans for its owner and for the AltairStrickland team.

**AltairStrickland and Valero work toward a good solution**

AltairStrickland, as the general contractor, worked with Valero and Diamond Refractory to discuss findings and to devise an efficient and cost effective solution. It was decided to cut the remaining dust bowls, remove them from the regenerator and place them in a lay-down area. This would allow Diamond Refractory to work on the dust bowls while repairs continued inside the remaining cyclone bodies. AltairStrickland also installed a bulkhead to separate the upper portion of the regenerator from the lower portion. This promoted safety while allowing work to continue on both portions of regenerator.

**More difficult hurdles**

The main air blower was one portion of the project that needed the experience and forethought of the AltairStrickland team. The blower had inlet and outlet lines with a 60-inch diameter. Both lines had to be aligned with an expander to within a fifteen-thousandths of an inch tolerance. This difficult task was accomplished on the first try. AltairStrickland commended Turnaround Welding Services for their precision cutting and mitering skills that were an integral part of the job.

**Ahead of schedule**

Despite the surprises, AltairStrickland and its many teams completed the turnaround in 26 days — two days under schedule. What happens to quality when time is of the essence, the weld repair rate for this project ended up being a remarkable 0.0009 percent with a total of less than nine inches of

repair. AltairStrickland credits Diamond Refractory for high-quality refractory services and Turnaround Welding Services for their quality piping services.

**How did the early completion affect safety?**

There were zero recordables on this job, which was an amazing accomplishment considering the amount of surprises on the project as well as the heavy lifting and rigging required.

When projects are planned properly and given time on the front end, it makes for a safer turnaround. The personnel at the Valero Wilmington refinery were open to suggestions for the project. Their support and dedication to safety helped create an atmosphere that was above standard bar for safety making this project a safe project for all that participated.

**AltairStrickland brought their experience in FCCU turnarounds to the customer**

In the project's early stages, AltairStrickland brought together a team of experts for the Valero plant. The plant owners allowed AltairStrickland to select their own subcontractors. Since AltairStrickland performs an average of four FCCUs annually, their team has determined which subcontractors are best for each given activity. All subcontractors are required to uphold the same standards that AltairStrickland embodies. AltairStrickland and the subcontractors were brought together with the goal to provide a lower cost, high quality and safe turnaround. This common goal was achieved in record time.

For more information about this and other projects, call Whitney Strickland at AltairStrickland at (281) 478-6200. ▬



Getting ready to lift reactor from ground transport vehicle.



AltairStrickland riggers make sure the rigging lines up correctly for the installation.



The transportation of the reactor was put in 3D autocad. It had to travel about 1 mile from the port of Los Angeles to the refinery.



AltairStrickland utilizes experienced contractors such as Bay Ltd. for the reactor transportation portion of the project.



Difficult projects are a specialty at AltairStrickland. Experienced personnel and planning are the key to successful project such as this.



Crane selection for your project can be crucial. AltairStrickland's engineering and project team helps the customer by bringing the experience of over 28 years of heavy lifting and knowledge of recent innovations within the industry to help save the customer time and money during the project.



As much structure modification as possible is done ahead of time to reduce the unit downtime. AltairStrickland utilizes Certified Safety Specialists, a third party safety provider for their safety professionals and attendants.



By calculating and planning ahead of time the risk is taken out of big lifts such as this, downtime is minimized and safety is put at the forefront.



Large lifts and installs such as this are rehearsed using 3D autocad to make sure things will be done right the first time and all will fit correctly.