

Case Study

Versatile Hydratight machining & weld testing ensure integrity in refinery upgrade



Above Dual-purpose inline isolation and weld test tool is inserted into a cut pipe



Below A Hydratight MM120 clamshell

“Hydratight was selected because of our multi-purpose and versatile tooling. The client was especially impressed with our team’s flexibility to complete the project on time despite shifting schedules.”

Luca Ghiotto
Hydratight Product Manager –
Specialty Services

As part of a scheduled maintenance program, several processing units were planned to be shut down at a major refinery in North America that produces over 100,000 barrels of petroleum per day.

Hydratight was commissioned by the operator to provide machining and weld testing services for a wide variety of pipe and tubing requirements.

The Challenge

Pipework of various diameters (from 6" (DN150) to 16" (DN400)), materials and wall thicknesses needed to be cut, beveled, counter-bored, and flange-faced to meet exact specifications. Alongside machining services, safe pipeline isolations were required during hot work activities and new welds needed to be pressure tested before start up.

The Hydratight team was tasked to complete the machining and testing phase of the project within a tight timeline of 45 days to help bring the plant back online with no delay.

The Solution

Hydratight’s portable clamshell machines were selected for their versatility and proven track record in fabrication and refurbishment across various industries. In total, 18 different clamshells were approved and deployed for use on the refinery infrastructure.

Along with machining equipment, Hydratight’s dual purpose isolation and weld test tools were deployed to maintain a vapor barrier during welding, and subsequently, to perform localized weld testing to verify system integrity. Hydratight’s weld-test isolation services on this project covered 3/4" to 12" (DN20 to DN300) sizes in multiple schedules.

A team of eight technicians, led by a project manager, was employed across both day and night shifts, to coordinate schedules and ensure speed of execution around the clock while maintaining the highest level of safety.

The Results

The scope of work was successfully completed within the 45-day deadline. Hydratight created a safe workspace on site with recognized and experienced personnel, defined processes and proven tooling. The work was ultimately completed on time, at lower risk, higher efficiency and overall lower cost.

Feedback from the customer showed a high safety record, with only necessary personnel working at any one time. A range of machines with capabilities to work on pipe and tubing ranging from 0.84" (21.34 mm) to 177" (4495.8 mm) were available if required.

For more information, visit hydratight.com.