



Repairing a Fleet of Pump Trains After Hurricane Harvey



HydroTex repaired and tested a batch of over 20 pump trains from a Texas energy company. Due to the way the pumps were stored, each came with its own set of unique challenges.

In 2008, a large energy company in Texas purchased over 20 complete pump trains, including motor skids, pumps, and all the components. While they were waiting to be installed, the pumps were store in a laydown yard and suffered severe water damage when Hurricane Harvey, a category 4 storm, made landfall in Texas in August 2017, causing catastrophic flooding throughout the area. To complicate matters further, in 2019, Tropical Storm Imelda caused further damage to the equipment.

In early 2020, the energy company sent the weather-damaged equipment to [HydoTex Golden Triangle](#) in Beaumont, Texas for a complete evaluation, repair, and high-quality performance testing.

All 20+ pump trains had similar damage, but each one had its own unique repair scope. HydroTex was able to create plans to appropriately refurbish all of the pumps. The plans ensured that the pumps would be tested to verify proper mechanical and hydraulic performance. HydroTex initiated reverse engineering on all the equipment and major components while sending the motors to a vendor in Baton Rouge, Louisiana.

To verify the quality of each repair scope, HydroTex offered to include a mechanical run test of each pump and [Hydro's Performance Test Lab](#) in Chicago. The mechanical run test would verify that the refurbished pump operated with minimal vibrations and expected thermal increases during operation. This test would provide assurances to the end-user that when it comes time to install each pump that they can expect reliable performance and an extended lifespan of the pump.

In addition to a mechanical run test, the Hydro's test lab was able to provide a complete hydraulic performance test. By adding this service, the end-user would be able to confirm that the pumps would meet the process conditions necessary to perform when installed. The assurance of mechanical performance *and* hydraulic performance provided the best decision-making information to the end-user, setting them up for long-term success with these pumps, and building trust in the quality of the repair.

The fully refurbished and performance-tested equipment is now stored in an indoor storage facility rather than an open yard with exposure to the elements.

The 20+ pump trains were prioritized into three sets. HydroTex delivered all the refurbished equipment



in record time—less than a year. Even with delays caused by a global pandemic, HydroTex was able to deliver the first priority set, with the second set delivered a month later, and the third set delivered within the following month. Each had to be individually assessed with specific plans of action and specific performance testing.

Some of the repairs required were more intricate and meticulous than others. These are complete pump trains and not only individual pump repair. HydroTex also repaired all the skids, all the seal changes, all couplings, and coupling guards, the bases, and the foundations.

Read the article in Pumps & Systems [here](#).