Fixture Testing
High Pressure Exposure Testing in Sour (H₂S) Environments

Southwest Research Institute® (SwRI®) has a long track record of providing research and testing services to the oil and gas industry. SwRI offers unique facilities and capabilities to help oil and gas companies advance the technology required for upstream and downstream applications. SwRI is working with industry to determine the sealing integrity, compatibility and degradation resistance of seal packet assemblies residing inside choke valves and wellhead equipment exposed to high-pressure hydrogen sulfide (HP H₂S) sour service environments. SwRI has developed HP H₂S sour capabilities up to 20,000 psi and -30°F to 650°F for testing in aggressive toxic environments.

Capabilities
To help clients meet new requirements for sealing material performance at higher pressures and greater thermal gradients in H₂S sour environments, SwRI uses a selection of API, ISO and ASTM standardized testing methods. Customized tests designed to meet client specifications allow SwRI to address client needs and provide flexibility in testing.

SwRI engineers offer a broad-based view of sealing material performance through long-term exposure testing in HP H₂S environments, valve seat localized corrosion-induced seal failures, seal materials selection, life prediction and failure evaluations.

Facilities
SwRI’s high-pressure high-temperature (HPHT) sour gas fixture testing facility maintains various temperature-controlled ventilated test chambers, equipped with H₂S monitoring alarms and gas scrubbers, dedicated for HPHT sour exposure testing of test fixtures, full-size valves and drilling equipment.

Test environments include hydrocarbon-chlorinated brine fluids charged with an array of H₂S/CO₂/CH₄ combinations depending on the material class designated for seals at elevated temperatures. Cyclic HPHT and rapid gas decompression testing can also be performed on seal assemblies inside valves or drilling equipment in compliance with API, ISO, NORSOK and NACE standards.
We welcome your inquiries.
For additional information, please contact:

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