



SOUTHWEST RESEARCH INSTITUTE



Structural Analysis & Experimental Strain/Stress Measurement Technology

Southwest Research Institute® (SwRI®) designs, fabricates, and tests pressure vessels, pressure housings, and subsea diving systems. Structural Engineering Department staff members have a combined total of more than 200 years of experience in experimental strain measurement and analysis of structures under various load conditions. SwRI employs the latest technology in instrumentation to provide clients with realtime data formatted for accurate analysis and verification of finite element analysis.

Capabilities

SwRI has the capability to perform in-house or field testing services. The staff has performed stress analysis test services for commercial and government clients in many areas including boilers, pressure vessels, submersibles, diving systems, composite housings, titanium instrument housings, and aircraft structures.

Facilities

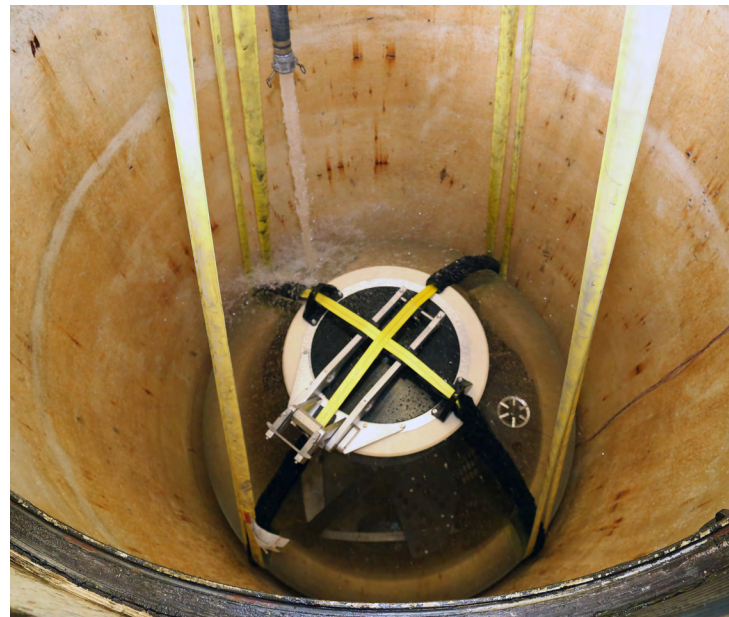
- Fabrication facilities
- Tension and compression test load frames
- Ocean simulation chambers
- Computer strain gage data logger systems

Experience

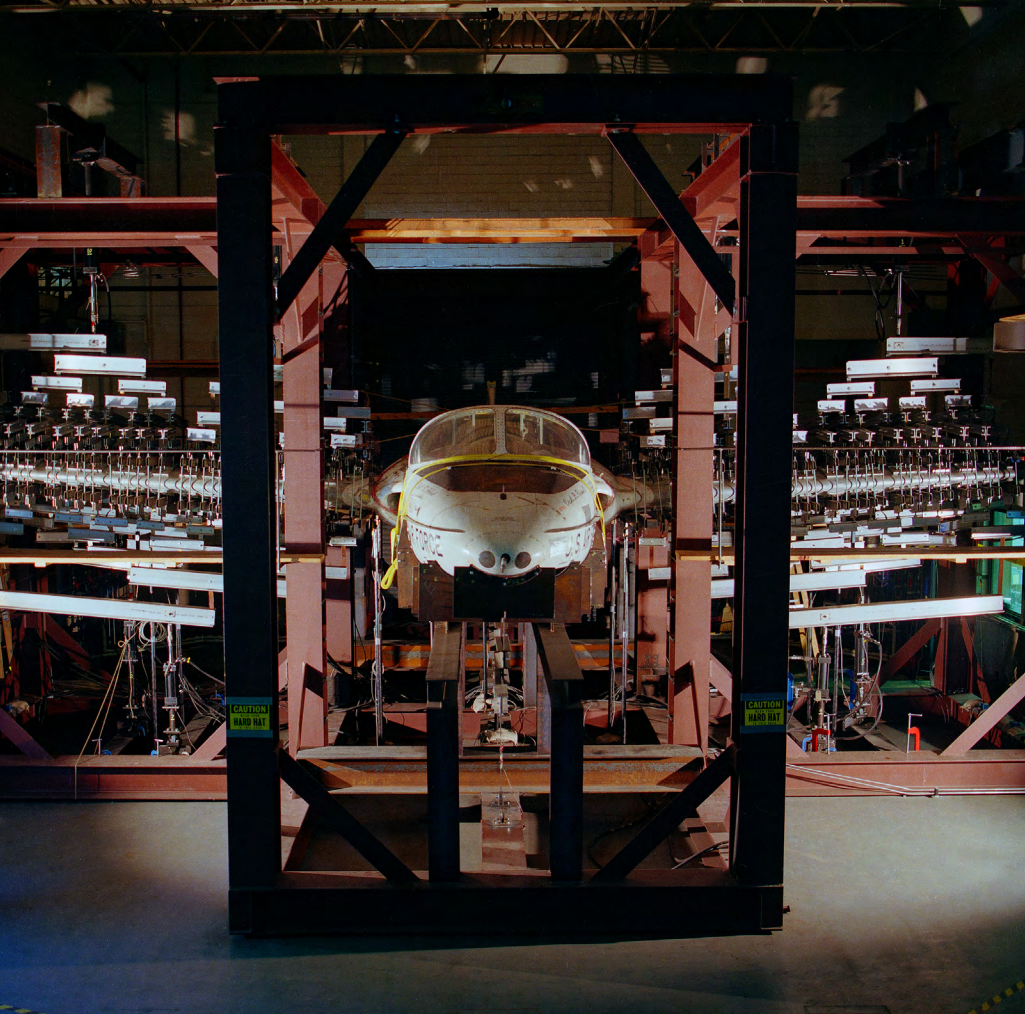
- High-strength steel, aluminum, acrylic and composite hulls and housings tested for the U.S. Navy and numerous commercial submersible/ diving system companies
- Aircraft and related structures testing
- Submarine hull and sail testing
- Steel pipe connectors, composite pipe burst testing
- Harsh environment applications
- Field services for tests on boilers, digester tanks, hulls, decompression chambers, hot taps, pipelines, and many other applications



One-man submersible hull instrumented with strain gages for external pressure test to establish maximum depth capability



Pressure hull instrumented for external pressure test



Full-scale test setup of T-38 on SwRI load frame test facility



Instrument housing strain gaged prior to proof pressure test

We welcome your inquiries. For more information, please contact:

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SOUTHWEST RESEARCH INSTITUTE

Southwest Research Institute® is a premier independent, nonprofit research and development organization. With eleven technical divisions, we offer multidisciplinary services leveraging advanced science and applied technologies. Since 1947, we have provided solutions for some of the world's most challenging scientific and engineering problems.

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