



TESTING CAPABILITIES

Comprehensive testing of oilfield tools and perforating systems

Owen Oil Tools, a Division of Core Lab, offers complete testing of downhole equipment at its North American headquarters in Godley, Texas. Convenient to the Dallas/Fort Worth metroplex, the Owen testing facility offers testing to API or supplier defined specifications. Equipment testing includes packers and bridge plugs, perforating charges and gun systems, and a wide variety of downhole components.

Simulated downhole testing ensures that equipment will perform to expectations before deploying it in your well. This is particularly valuable for companies encountering unusual well or formation conditions, new applications, or extremes of well temperature and/or pressure. Testing not only ensures that the equipment will work, but also that its performance under difficult conditions will be adequate to the task for which it is intended.

Testing is conducted under existing API recommended practices (RP) guidelines. For new applications where RP have not yet been established, Owen engineers can design custom tests, fabricate testing equipment, conduct the tests and collect data to satisfy users that their planned approach will deliver expected results. Here are some examples:

Product Verification Testing—Extensive testing is conducted to verify product performance and reliability under simulated well conditions. Not limited to Owen products, tests can be designed and applied to third party equipment as well.

Fit-for-use Testing—When a product or system is expected to encounter conditions that exceed its standard application, Owen can test for appropriateness and quantify results (e.g., evaluate effect of exposure to elevated pressures and temperatures, assess collateral damage to outer strings in multi-string scenarios).

THE FACILITY

State-of-the-art 200-acre remote testing facilities consist of a main building containing a fabrication shop, assembly and gun loading shop, API RP-19B Section 2 test facility, and a comfortable observation area with closed circuit TV feeds from multiple cameras. Multiple surface and subsurface testing areas have been constructed, including a pressure and temperature test facility with capability to 40,000 psi (276 MPa) and 600°F (316°C), as well as push/pull testing capabilities. Our live video feeds are accessible from anywhere in the world.

PRESSURE AND TEMPERATURE TESTING VESSELS

MAXIMUM PRESSURE (PSI)	MAXIMUM TEMPERATURE (F)	MAXIMUM INSIDE DIAMETER (IN.)	INSIDE LENGTH (IN.)	TYPE OF TEST		
				STATIC LOADING	DYNAMIC LOADING	BALLISTIC FUNCTIONING
40,000	600	8.00	110.0	●		
30,000	500	2.00	10.8	●		●
23,000	325	5.00	30.0			●
22,000	400	4.00	72.0	●		
20,000	450	4.00	83.7	●	●	

API RP-19B -- EVALUATION OF WELL PERFORATORS

TEST	DESCRIPTION	CAPABILITY
SECTION 1	Evaluation of Perforator Systems under surface conditions, concrete targets	●
SECTION 2	Evaluation of Perforators under stress conditions, Berea targets	●
SECTION 3	Evaluation of Perforator Systems at elevated temperature conditions, steel targets	●
SECTION 4	Evaluation of Perforation Flow Performance under simulated downhole conditions	
SECTION 5	Debris collection procedure for Perforating Guns	●
SECTION 6	Evaluation of Perforating Systems to determine swell	●

API 11D1/ISO 14310 -- PACKERS AND BRIDGE PLUGS

TEST	DESCRIPTION	CAPABILITY
V0	Gas test (Nitrogen) + Axial loads + Temperature cycling + Special acceptance criteria (V1 + Zero bubble acceptance criteria)	●
V1	Gas test (Nitrogen) + Axial loads + Temperature cycling	●
V2	Gas test (Nitrogen) + Axial loads	●
V3	Liquid test + Axial loads + Temperature cycling	●
V4	Liquid test + Axial loads	●
V5	Liquid test	●
V6	Supplier/Manufacturer-defined	●

FLUID TESTING CAPABILITIES UP TO 40,000 PSI AND 600°F. GAS (NITROGEN) TESTING CAPABILITIES UP TO 30,000 PSI AND 600°F.

ADDITIONAL SERVICES

- High speed video services with frame rates up to 650,000 fps
- Push/pull testing capabilities up to 300,000 lbf (136 tf)
- UN Test Series 6 testing capabilities
- FEA (Finite Element Analysis) simulations for solving stress/strain behavior, dynamic and vibration response, and nonlinear behavior
- Rapid prototype 3D printing with part sizes up to 10" W X 10" D X 12" H



For the latest up-to-date information visit:
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