PRESSURE & TEMPERATURE TESTING

Facility for testing at downhole conditions



Downhole Instrumentation

And

Control

System



Description

A large HPHT test cell form the core of the facility. The permanent cell is equipped with trace heating, pressure control, data acquisition sensors and fluid flow capability. A test programme can typically involve a range of temperature and pressure set points both on the annular side as well in-pipe or a combination of both. Remote operation of all testing with a 24/7 comprehensive data system log. The facility is flexible for adjustments to meet customers' needs including new test chambers.

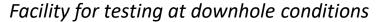
The IRIS barrier system can safely handle kinetic load impact of 750 kJ, (equal an object of 60 kg with speed of 25 m/sec/90 km/h) All tests are evaluated against this for decision of facility customization.

Facility specification	Main test cell	Facility in general	
Maximum test piece OD	220mm/8.66"	na	
Maximum test piece length	15m/49.2ft	20 m	
Maximum flow rate	0-1100 l/min/0-290 gal/min	4000 L/min	
Maximum tubing pressure	830 bar/12 000 psi	1300 bar	
Maximum annulus pressure	525 bar/7 600 PSI	1300	
Temperature range	Amb. to 200°C/428°F	-20 to 250°C	

Application

A range of smart well inflow systems, packers, plugs, liner hangers and downhole equipment in general have previously all been thoroughly tested in this facility. Special test chambers can be constructed and integrated towards existing infrastructure on the facility to support testing of all types of tools and equipment.

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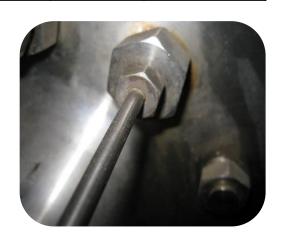


IRIS barrier system safely allows a total impact of 750 kJ load in this facility. In general a facility suitable for a large variety of test applications

Test facility facts in general	Value	Unit
Communication to low pressure, high flow system Clean fluid & Sand Slurry.	4000	L/min
Hydraulic system for speed control when opening/closing	600	Bar
hydraulic actuators (gatevalves).	4-120	sec. (adjustable)
Pressure capacity on test objects.	1376	bar
Temperature standard mode	-20 to +300	°C *

^{*}pressure & temperature range can be expanded.

All operations PLC conducted



Typical test programs

Statoil TR 2385

ISO 14998

ISO 14310

ISO 10423

API 6A

Rogaland Research Gate Valve program

Rogaland Research Down Hole Safety Valve program

Available bleed down procedures for gas to avoid Rapid Gas Decompression (RGD)