Acid fracture conductivity system

The FCAF-01 for measuring the fracture conductivity in the acid fracturing process and determines short term and long term fracture conductivities in realistic at conditions as close to the field treatment conditions.

With reliable laboratory experimental results, engineers will understand the acid fracturing mechanism and build a realistic model to improve the treatment design.

The device also has the ability to measure the change in conductivity of the fracture using brine and nitrogen gas.

The standard system encompasses an injection pump, Cylindrical heaters, hastelloy fracture conductivity cell, hydraulic press, pressure transducers, two back-pressure regulators, plumbing and a data acquisition computer station.

Maximum closure stress	up to 20,000 psi
Flow pressure	up to 10,000 psi
Maximum working temperature	Ambient to 180°C
Sample diameter	7x1.5x2 inches
Wetted parts material	Hastelloy c276
Hydraulic press	Compression rating: 100 tons
Non wetted parts	Stainless steel 316
Conductivity test pump	Double cylinder syringe pump, chem pump

Advantages

✓ Fully automated apparatus
✓ Uses specimen with large exposed surface area to acid
✓ The use of thick core samples allows the leakoff and wormhole phenomenon to be monitored during acid injection
✓ Perform both short term and long term conductivity tests Achieved any desired closure stress
✓ Simulates fluid leak off, and therefore accounts for damaging effects of fracturing fluids.