Fluid Density Tool

Measures fluid density in the measurement window of the tool

Applications

- Fluid identification
- Fluid holdup

Features and Benefits

- Combinable with all high-speed digital (HD) telemetry tools for comprehensive evaluation
- Long-life Americium source
- · Unaffected by deviation or fluid velocity
- Compact, versatile, and robust

Tool Description

The Weatherford fluid density tool uses a double-encapsulated, lowenergy AM241 source and scintillation-detector assembly to measure fluid density in the measurement window of the tool.

This measurement is unaffected by well deviation or fluid velocity, making it deployable in a wide range of environments. The fluid density tool is a short, robust, and reliable tool that is easily maintained and well-suited to e-line surface readout operations or memory operations on slickline, coil tubing, or tractor.

High voltage to the PMT is adjusted with temperature to maintain sensitivity over the whole temperature range.

The tool uses a dual-channel receiver. The second channel counts high-energy gamma rays from scale or formation, which correct the main channel.





Fluid Density Tool

Specifications

Ratings and Dimensions

| Maximum temperature | 350°F (177°C) |
|---------------------|------------------------|
| Maximum pressure | 15,000 psi (103.4 MPa) |
| Outside diameter | 1.69 in. (43.3 mm) |
| Length | 28.3 in. (719 mm) |
| Weight | 12.7 lb (5.8 kg) |
| Measure point | 6.4 in. (163 mm) |

Sensor Characteristics

| Measurement range | 0 to 1.25 g/cc |
|-------------------|----------------|
| Accuracy | ±0.03 g/cc |
| Resolution | 0.01 g/cc |

Hardware Characteristics

| Materials | Corrosion-resistant materials used throughout |
|------------------|--|
| Combinability | All HD tools (RADil [®] , iQ [™] , PL, RAS [™] , etc.) |
| Acquisition mode | Real time with telemetry control unit (TCU) Memory with memory logging tool (MLT) |



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