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TECHNICAL DATA SHEET

FDI

Fluid Density Inertial

The Fluid Density Inertial (FDI) tool measures the inertial response of a vibrating tuning fork to determine the density of wellbore fluids, providing accurate fluid identification without the use of a radioactive source.

The FDI tool is a non-radioactive method of determining liquid and gas density which is unaffected by well deviation. The sensor comprises a stainless steel tuning fork which is vibrated near its natural frequency of operation by a Piezo-ceramic stack. The frequency and amplitude of vibration are used to determine the actual density of the fluid surrounding the fork.

Optimum quantitative results are achieved in liquid-liquid mixtures or in pure gas.

APPLICATIONS:

- Production profiling
- Fluid Identification
- Horizontal and highly deviated wells
- High flow rate wells
- Ease of logistics for remote location operations

BENEFITS

- High accuracy, repeatable measurements across wide fluid density range
- Improved performance compared with radioactive alternatives in very high background gamma applications (e.g. large quantities of radioactive scale)
- Non-radioactive tool - ease of logistics and safe handling
- Deployable on Slickline, Electric line, Coil Tubing and Tractor
- Suitable for all well deviations, including horizontal



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Specifications

Temperature rating	350°F (177°C)
Pressure rating	15,000 psi (103.4 MPa)
Tool diameter	1 11/16 in (43 mm)
Tool length	23 in (585 mm)
Tool weight	7.8 lb (3.55 kg)
Measurement range	0 to 1.25 g/cc
Measurement accuracy	±0.03 g/cc
Measurement resolution	0.01 g/cc
Materials	Corrosion resistant throughout