Caged Fullbore Flowmeter (3 arm CFBM)

The Sondex Caged Fullbore Flowmeter is run at the bottom of the Production Logging tool string. A large diameter impeller accurately measures downhole flow rates with coverage over a large cross section of the casing.

Description

The tool has a three arm, spring-loaded cage that centres the spinner in the middle of the flow and supports tool weight in deviated wells. The spinner runs on precision bearings, its rotation is sensed by zero drag Hall effect detectors allowing the measurement of very low flow rates. Normal output is 10 pulses per revolution with directional indication. The spinner and cage assembly collapse down to tool diameter, when running through tubing restrictions to prevent damaging the blades.

Features

- Injection and production flow profiling.
- Measurement of low flow rates.
- Leak detection and cross-flow.
- Interchangeable mechanical sections to match casing size from $4^{1}/_{2}$ - $9^{5}/_{8}$in.
- Combinable with other Ultrawire™ PL Tools.
- Connects to either a Flowmeter Electronics (CFBE) or a Capacitance/Temperature/Flow Tool (CTF).
- Modification kit available for connection to $1^{3}/_{8}$in CTF.
- Lockable spinner for high rate injection wells (standard feature for $9^{5}/_{8}$in tools).
- Solid impeller shafts for very high rate wells.

Specification

Temperature rating	350°F (177°C)
Pressure rating	15000psi (103.4MPa)
Tool diameter	$1^{11}/_{16}$in (43mm), $1^{3}/_{8}$in (35mm)
Tool length	2.91ft (0.89m)
Tool weight (dependant on spinner and cage sizes)	10lbs (4.5kg) for $1^{11}/_{16}$in tool with 7in cage
Sensor measure point (from bottom of the tool)	13.5in (349mm)
Output	10 pulses/revs (directional)
Spinner threshold	1.7ft/min approx (0.01m/s), 100bpd in 7in casing
Max fluid velocity	500ft/min (2.54m/s), 28250bpd in 7in casing
Casing range	$4^{1}/_{2}$in to $9^{5}/_{8}$in
Materials	Corrosion resistant throughout

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