

HHP UltraWire Radial Bond Tool

Detailed, qualitative analysis of the zonal isolation achieved by cementing services in HHP wellbores

Application

- Identify the top of lead and tail cement
- Evaluate the cement bond quality to the casing
- Evaluate cement bond quality to the formation (VDL)
- Identify channels in cement
- Identify micro-annulus with subsequent pressure pass
- Identify the cement squeeze interval in case of a bad cement job
- Determine the depth to cut and pull casing

Features

- Single transmitter, 3 ft (near) and 5 ft (far) receivers, 8-segmented radial receiver array for radial cement imaging
- Variable sampling rates to maximize data acquisition
- Interchangeable telemetry cartridge
- Slotted sleeve design for improved rigidity, strength and acoustic isolation
- Fully combinable with other UltraWire and UltraMemory™ tools

The **HHP UltraWire™ Radial Bond Tool (RBT)** operates in hostile environments of up to 400°F and 30,000 psi, facilitating detailed, qualitative analysis of the zonal isolation achieved by cementing services in HHP wellbores. Effective hydraulic isolation from water-bearing formations is crucial to maximize the productivity of hydrocarbon-bearing reservoirs. Poor cementing allows unwanted fluid transfers between zones resulting in the potential for lost or unwanted production. The tool allows poor cement conditions to be detected

before perforating, enabling proactive measures to be taken. Its size, rigid isolator, and powerful transmitter allow robust operations. In addition to the traditional 3 ft amplitude and 5 ft VDL, the RBT has a radially segmented, calibrated amplitude measurement. This focuses the transmitted sonic pulse circumferentially allowing the differentiation of small axial channels as opposed to poor or contaminated cement. The onboard temperature sensor quantitatively monitors thermal operations.

Specifications

Temperature rating	400°F (204.4°C)
Pressure rating	30,000 psi (206.8 MPa)
Tool diameter	3 1/8 in (79.4 mm)
Tool length	(makeup) 13.175 ft (4.016 m), (transport) 13.8 ft (4.206 m)
Tool weight	151.65 lbs (68.79 kg)
Supply voltage	18V DC
Power/current	40 mA
Receivers	Piezoelectric crystal
Signal output	3 ft amplitude, 5 ft VDL and a cement quality map generated by the calibrated 8-segment receiver array
Measure point	(3 ft amp) 61.6 in (156.5 cm), (5 ft VDL) 49.6 in (126.0 cm)
Logging speed	(50 Kbps) 70 ft/min (21 m/min), (100 Kbps) 100 ft/min (30 m/min)
Borehole environment	Fluid Media (i.e., brine, oil, fresh water, drilling mud)
Maximum casing/ tubing ID	34 cm (13.4 in)

