

HSR-35: HIGH SPEED RADIAL CEMENT BOND LOG



The High-Speed Radial (HSR-35) tool evaluates the cement bond quality and integrity to both pipe and formation by providing the measurements of the cement bond amplitude (CBL) through the near receiver (3-ft crystal) and variable density log (VDL) through the far receiver (5-ft crystal). The HSR tool also provides a cement map through twelve segmented receivers; each segment covers a 30° section of the pipe. All sonic data is captured and stored digitally within 2ms after the transmitter fires allowing flexibility of the output telemetry. This tool is easily configured to our customer's requirements. The separate acquisition and output module allows changes to the output telemetry to be easily accomplished. HSR-35 has a built-in Top Side Locator (optional) which determines the top of the tool during logging.

Applications:

- Evaluation of cement bond quality and integrity
- Location of free-pipe and cement-top
- 360° cement map (12 Radial Receivers)

Features:

- Rated for high-temperature and high-pressure environments
- Gamma-ray detector, CCL detector, and temperature sensors are built-in
- Compatible with more surface systems
- Runs on all standard wirelines
- Combines with all standard pulse tools on the bottom
- All receivers are built in a slotted housing to provide rigidity, strength, and noise isolation
- Built-in Top Side Locator (optional)
- Rigid design ideal for horizontal logging
- Electronic design verified for 1-hour operation at 415°F to ensure reliability
- Easy to service and maintain

Specifications:

Tool Operating Voltage	100 to 150 VDC	Tool Length	Under 4.0 m (13 feet)
Tool Operating Current	80 to 90 MA	Tool Weight	104.3 kg (230 lbs)
Tool Time Cycle	3 x 50 ms = 150 ms	Tool Positioning	Must be centralized
Max. Temperature	204°C (400°F)	Max. Logging Speed	Up to 30 m/min (100 ft/min)
Max. Pressure	172.4 MPa (25,000 psi)	Borehole Fluids	Oil - Fresh Water - Brine
Receivers	Near & Far = 2 5/8" Omni Radial = 12 Segments	Measurements	Near = 3 feet Far = 5 feet Radial = 2 feet
Transmitter	2 5/8" Dia. Omni	Recommended Max. Casing ID	346 mm (13.625 in)
Tool Diameter - OD	88.9 mm (3-1/2 in)	Recommended Min. Casing ID	140 mm (5.25 in)