

600°F Memory Multi-Finger Caliper

Scientific Production Services's Casing Wall Detective

Scientific Production Services's (SD) 600°F Multi-Finger Caliper tool extends both minimum and maximum finger excursions on the inside of the casing wall. It gathers information on internal casing condition and calculates the degree to which the casing is worn. The Caliper also detects the presence of inside casing wall anomalies.

Sensor Readings Reveal Casing Wall Problems

The Caliper records maximum and minimum internal radii irrespective of their relative circumferential position. These data define the physical integrity of the internal casing. The minimum reading depicts the smallest internal diameter, while the maximum reading depicts the largest internal diameter. These min/max readings reveal pitting, holes, distorted or collapsed sections, cracks, slots, and separated collars.

Unique Operational and Safety Features

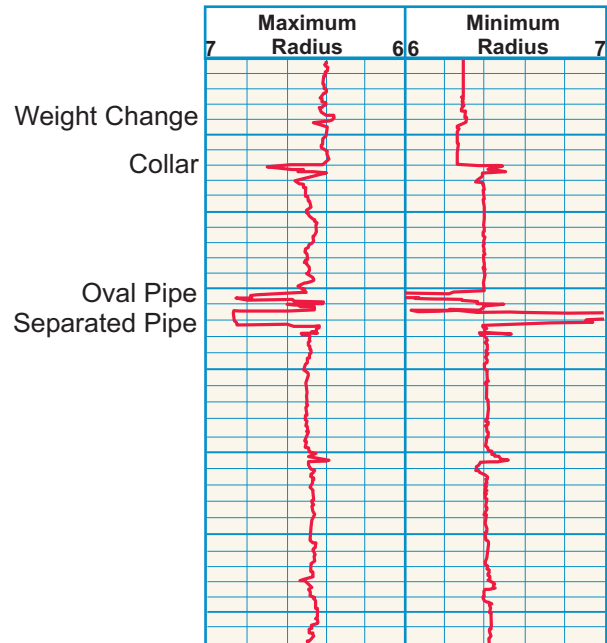
While logging is performed with the tool moving in the uphole direction, the Caliper has a unique sensor that allows the opening and closing of fingers and centralizers downhole. This enables the running of multiple passes to verify repeatability. As a safety feature, the Caliper automatically shuts down if left motionless for a preset time period.

Cost-Savings, High-Temperature Performance

A key advantage of the Scientific Caliper tool is its very high temperature capability. The system operates at temperatures up to 600°F (315°C) for periods up to 10 hours. The Caliper performs accurate, high-temperature evaluations of geothermal, oil, and gas wells.

Instantaneous, Onsite Results

The Caliper is powered by high-performance lithium batteries. Data are recorded to 4Mb of non-volatile, onboard memory. After the tool reaches surface, data are uploaded to a notebook computer and results are plotted onsite instantaneously.



ADVANTAGES

- Detects internal corrosion
- Measures internal diameter and "out-of-roundness"
- Identifies differing weight or wall thickness in casing joints
- Locates casing wall pits, slots, cracks, and holes
- Finds and evaluates defects due to mechanical failure
- Reveals scale and paraffin buildup
- Exposes separated collars
- Detects distorted or collapsed sections
- Performs in extreme-temperature environment
- Provides fast, accurate onsite evaluations

Technical Specifications

	5.31 in (13.49 cm)	9.70 in (24.64 cm)
Diameter:	5.31 in (13.49 cm)	9.70 in (24.64 cm)
Length:	72 in (182.88 cm)	72 in (182.88 cm)
Number of Fingers:	60	90
Minimum Measuring Range:	5.31 in (13.49 cm)	9.70 in (24.64 cm)
Maximum Measuring Range:	13.5 in (34.29 cm)	18 in (45.72 cm)
Accuracy:	± 0.05 in (± 0.127 cm)	72 in (182.88 cm)
Logging Speed:	3-60 fpm (9-18 mpm)	30-60 fpm (9-18 mpm)
Temperature Rating:	600°F (315°C)	600°F (315°C)



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Pipe Cross-Section and Representative Log

