Laser Profiler
Internal pipeline inspection tool

The Laser Profiler tool is used with a closed-circuit television video (CCTV) survey system to collect inspection data for detailed analysis of internal pipeline conditions. This includes information pertaining to size (ID), ovality, fluid levels, scaling, internal corrosion, and surface cracking.

The tool uses a laser to build an actual profile of the inside of the pipe. A self-propelled vehicle travels through the pipe and defines the profile in real time, using the laser and camera. The laser projects a circle around the pipewall ID; this projected circle is then extracted from acquired images, using recursive Gaussian filtering.

FEATURES

- Provides real-time, highly accurate inspection data
- Operates in different pipe sizes, including liquid-filled pipes
- Easily identifies foreign objects, defects, and damage
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Tool Capabilities

The Laser Profiler tool provides accurate internal pipe wall diameter and circumference measurements, as well as corrosion measurements. It locates and positions foreign objects, confirms pipe ovality, and identifies internal surface welding defects and concrete lining damage.

This tool is easily adaptable to different pipe sizes and can be used in liquid-filled pipes. It has a comprehensible variance presentation, and its inspection data and fully auditable results can be easily evaluated.