

ArmorPIPE™ – Intelligent Pipe Scanning Technology

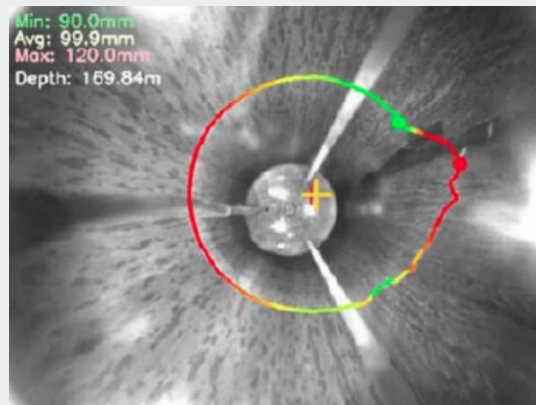
Accurately measure the thickness of your borehole casings while preventing costs associated with unpredictable downtime.

A unique industry solution designed to provide you with the latest internal non-destructive testing service for difficult-to-access pipe systems. It effectively measures abrasive wear, identifies damages, fracture zones and imperfections, providing you with unheard of accuracy in condition monitoring and even detailed reports that reduce your long-term maintenance and replacement costs.

These distinctive reports will consist of precise internal measurements, detailed wear patterns, high quality visual imaging for condition monitoring and customised post reporting solutions that help you detect integrity problems early; reducing costly, unnecessary repairs or replacement.

Borehole Scanning Capability:

- High resolution laser scanning technology accurately measures borehole internal diameter and identifies areas of high wear. Pipe wear can be tracked and overlaid with previous scans
 - Optimise paste fill/slick line systems to achieve lower wear rates and best throughput
- Internal diameter range: 90-550mm (Larger diameters reviewed upon request)
- Depth: 500m & 1000m system capability (Greater depths reviewed upon request)
- Static accuracy: 0.2mm
- Dynamic accuracy: 0.4mm standard deviation under worse conditions
- High-definition camera and adjustable lighting system to easily identify high wear areas and correct laser diffusion for different pipe conditions
- Quick measurement speed approx. 20m/min. Resolution can be increased over areas of interest
- Data processed in real time
- Laser intensity adjustable to accurately measure different materials:
 - Steel
 - Ceramic lined
 - Rubber/polyurethane lined
 - Uncased holes
- Small footprint allows quick mobilisation and setup between multiple boreholes

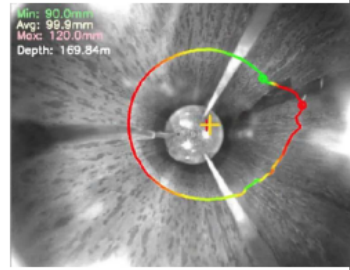


Site Requirements:

- 1m x 1m area centred over borehole inlet for tripod
- 1m x 1m area approx. 3m from borehole inlet for winch control and operator
- 230V AC Power source
- Bore lines to be thoroughly flushed before scanning
- Drawings/pictures of the borehole inlet to allow for the correct winch setup before arriving to site

Reporting:

- Customisable reporting options available.
 - Summary of hole condition for quick assessment
 - In depth analysis of pipe wear
 - Wear rates between successive scans
- Simple pipe condition reports or complete pipe profile sectional analysis
- All reports are supplied with complete HD video footage

Depth (m)	Note	Video Timestamp	Max localized wear (mm)	Average diameter (mm)	Pipe profile
169.84	Large localised area of highly asymmetric wear – Pipe worn through. Wear channel evident over 2metres	18:50	15.2mm	99.9	
288.15	Small localised area of high wear	23:31	5.5mm	93.5	