

Guided Ultrasonics

The Service

- The application of long range ultrasonic waves for the inspection of pipework
- Detects cracks and general metal loss (greater than 5% cross-sectional area)
- Difficult to inspect areas, such as buried or inaccessible pipes, can be screened

The Technology

A ring of transducers is placed at a designated area around the pipe to be inspected (2"-36" pipes can be screened). No couplant is required and little preparation is necessary to enable the inspection. When the actual test is performed, waves are sent in both directions from the position of the ring and the reflections are sent to the software on a connected laptop and are analyzed. Most of the time, we use the torsional mode, which is similar to a shear wave in conventional ultrasonics. The longitudinal mode, which is pictured to the right, can also be used. It is similar to a compressional wave in conventional ultrasonics.

The Kit

Roxby uses the Guided Ultrasonic Limited (GUL) system - a portable battery operated kit which is ideal for difficult to access locations. The system can use a variety of frequency waves and comprises fast, sophisticated software which dramatically decreases the test time required and automates most routine tasks.

The Benefits

- Inspects 100% of the pipe
- Inspects 360° of pipe wall for corrosion/erosion/defects interior and exterior
- Accurate where coating/insulation/location may cause problems for other techniques
- Utilizes either torsional or longitudinal waves
- Provides accurate readings
- Tests 2" up to 36" with same portable system
- Tests up to 80m in each direction from one inspection point (under ideal conditions)
- Cost-effective for difficult to access locations
- Can be performed without taking pipe out of service

